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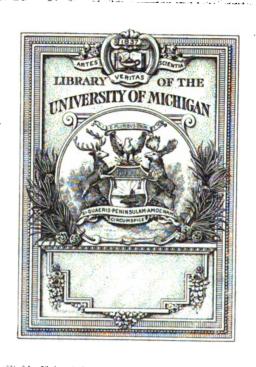
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THE FUTURE OF ECONOMIC THEORY.

A Point on which opinions differ is the capacity of the pure theory of Political Economy for progress. There seems to be a growing impression that, as a mere statement of principles, this science will soon be fairly complete. There remains, indeed, to be added to the list of accepted truths a theory of Distribution; but materials, at least, for such a theory are to be found in recent literature. Explanations of wages and interest that cannot be far from the truth have been offered; and, if it shall soon appear that any of these is demonstrating its correctness, and taking in the science the assured place that the modern theory of Value has already won, there will be a disposition to say that at last the theory of Economics has reached the condition in which, with only minor changes and additions, it is likely to remain.

It is, of course, true that the theories of Value, Wages, Interest, and Profits, constitute, in so far as importance goes, two-thirds of the theoretical science of Economics.

It is over questions of distribution that social classes contend with each other. Is property robbery? Does society need revolutionizing? The answer depends on the question whether, under free competition, wages are the specific product of labor; and this is one of the many points that are to be decided by a theory of Distribution. If, therefore, we are not in error in thinking that scientific thought is now on the right track, in connection with the problems of Distribution, and if there is soon to be a unanimity of view concerning the laws of Wages, Interest, and Profits, then, indeed, it is of importance to know whether any very great theoretical work is still in the future.

On the supposition that some one of the theories of Distribution that are now candidates for acceptance will soon reveal its own correctness, or that some modification of one of these will be adopted, or that out of them all some eclectic theory will be formed that will win assent, will the pure theory of Economics have further and large achievements immediately before it? There seems to be an impression that it will not.

It is with this view that I take issue. The great coming development of economic theory is to take place, as I venture to assert, through the statement and the solution of dynamic problems. Static problems have heretofore had most attention. That which in Ricardo's studies figured as a "natural value" is really a static value. It is a value that would be realized in a market if certain changes that are transforming society were stopped, and if the prices of goods were allowed to reach and keep the rates that a perfectly free competition would then establish. The wages and interest that in such studies would be regarded as normal are, in the same way, static wages and interest. The greater problems of the future concern dynamic values and dynamic wages and interest.

The difference between static problems and dynamic

ones becomes apparent if we divide the science of Political Economy in a natural way. This is a new mode of dividing the science; and it involves the abandoning of the time-honored plan of separating the whole of Political Economy into four parts, treating respectively of Production, Distribution, Exchange, and Consumption. The difficulty with this mode of dividing the science is that it gives parts that are not distinct from each other. Production, indeed, as it is carried on in a social state, is a process that includes both exchange and distribution. Production is the bringing of commodities into existence: and, in any state except the most primitive one, it is accomplished by a division of labor. The producer is personally a specialist, selling an article or a part of an article, and buying what he needs with the proceeds. Only society in its entirety is an all-around creator of goods. This is equivalent to saying that social production is accomplished by means of exchanges. ing of goods from hand to hand enables all society to make all goods; and the two expressions, "Division of Labor," on the one hand, and "Exchange," on the other, merely describe in two different ways the organized process of creating wealth. It is contrasted with the method of isolated and independent production. Let a thing stay in one man's hands until it is finished and in use, and production is not yet socialized. But let it pass from hand to hand in the making, and it is so. Society in its entirety is the one producer of wealth; and exchange is the socializing element in production. It is a feature of the more comprehensive process.

There is a kind of distribution that merely adjusts the incomes of what may be called industrial groups in their entirety, and does not settle questions of wages and interest. When wheat is high in price, the whole group of wheat-raisers gets a large return. How much of it goes to laborers and how much to the owners or the tenants of

farms is a further question; but high-priced wheat means much money to be apportioned somewhere among them. In like manner dear steel means much money for the whole group of steel-makers. The study of Value is, then, a study of Group Distribution. Yet it is a study of a feature of exchanges, and these are a feature of social production.

In another way is the distributing process identified with production, since, if modern theories are not wrong, the share of wealth that falls to any producing agent tends, under natural law, to equal the amount that he creates. A man's pay tends to equal the value of the product or fraction of a product that can be specifically imputed to him. The whole study of Distribution is, in this light, nothing but a study of Specific Production. It traces the wealth that society as a whole creates backward to the agents that have brought each specific part of it into existence. Production itself is a synthesis, in which countless agents bring each its contribution to the grand total of the world's income. Distribution is merely the undoing of this combining process. It is an analysis, and traces the wealth that has been synthetically created back to its ultimate sources.

All of the process of distribution, then, is included in production. The adjustment of values is group distribution, but it is also a feature of exchange. Exchange is merely the socializing feature of production. We cannot here stop to show how completely entangled with each other are the first three of the four traditional processes that it has been customary to treat in separate parts of the science. It is, however, clearly impossible to account for the fact that a man who wields a pick in excavating ground for a cellar gets \$1.25 a day, without discussing subjects that belong to the theories of Exchange and Distribution; yet at no time would the economist cease to be within the field of Production. He would have to

ascertain how much the man's group produces, and what part he personally contributes to the group's product. Not unfit for use as descriptive terms, but absolutely unfit for use as subjects of distinct division of the science of Political Economy, are the terms Production, Distribution, and Exchange.

Consumption is not an organized process at all. We make things collectively, but we use them each man for himself. We like to eat together, indeed, and to enjoy many things in company; but we do not co-operate in eating, as we do in producing food and other commodities. Consumption is an individualistic operation; and a treatise that limits itself to a distinctively social economy would not treat of it at all. It would assume that consumption is going on, and that production has no other object than that consumption may go on; but it would not include in itself any discussion of the consuming process. Production, on the other hand, in the civilized world must go on in an organized way; and exchange and distribution are involved in the organizing of it. Production includes all of the economic process that is strictly social. Consumption is not a good term to describe any part of such a strictly social economy.

Let us see whether the science can be divided on another plan. There are three distinct kinds of force working together in social economics. If we study them separately, we shall resolve economic science into three divisions, the boundaries of which have been drawn by nature. Man modifies matter by production; and matter modifies man through consumption. These processes do not necessarily require any organization on the part of the men who impart and then receive the impressions. All this could be accomplished by an isolated man or by men living together for protection or the mere pleasures of association, without any system of exchange of products. Let every one make his own goods and consume them, and an economic life of a certain kind is complete.

The distinctive feature of such a life is that it establishes direct relations between the individual man and nature. Every man subdues for himself a part of his material environment; and he gets the direct service that this bit of nature, when thus subdued, can render. There are no disguises thrown over the relation that workers sustain to the earth. Obvious dependence on nature, obvious independence of other men, is the rule of every one's economic life. Out of materials furnished by the earth each producer creates his own income; and there are no problems of distribution connected with it.

Yet in this mode of living, which puts every man face to face with nature, there is room for the action of all of the more fundamental laws of economics. Here is a hunter in a primeval forest converting the flesh of animals into food and their skins into clothing and shelter. is creating something that can be defined as wealth. has the essential marks that analysis detects in the wealth that crowds the shops of the modern city. The man uses capital, and includes in his equipment both the fixed and the circulating varieties of it. His consumption has its laws; and the chief of them is the one that calls for variety in the things consumed. He must not make and use too much of one kind of product and too little of another. He must guard against glutting some wants and letting others go unsatisfied, if the wealth that he creates is to do him much good.

There is a distinct set of economic laws, the action of which is not dependent on organization. They are fundamental; and what we have now to note is that they are universal. They act in the economy of the most advanced state, as well as in that of the most primitive. Wealth has everywhere the same distinguishing marks. The producing and the consuming of it are always subject to the same general conditions. The first natural division of economic science should present the universal laws of

wealth. It should discuss the more general laws of production and all the laws of consumption.

There is next to be studied a second set of phenomena. They are traceable to a further set of forces; and these originate in relations between man and man. They are made to work wherever persons begin to exchange products. This organizes society in groups, or specific industries. Let some men produce food and others build huts, and let them exchange products with each other, and things happen that are not accounted for by the laws of that general economy in which the direct relations of man to nature are explained. Exchanges involve the determining of values; and these, as we have seen, fix the terms of group distribution.

The organization of society is further extended when, within each group, or specific industry, there are employers paying wages to the men who labor and interest to those who furnish capital. Distribution, in a broad definition of that term, is that which results from organizing the wealth-creating powers. The division of economics that treats of it will first deal with group distribution, which depends on exchanges. It will describe the formation of the groups, account for the terms on which they buy and sell from each other, and show on what the income of each of them depends. It will then deal with that final distribution which takes place within each subgroup, and which fixes the wages, the interest, and the profits that are there received. This is equivalent to showing what becomes of the income that comes to a group as a whole. Laborers get some of it, capitalists get some, and entrepreneurs get the remainder. Broadly conceived, and made to include a description of the system of industrial groups, and of their dealings, the science of Distribution embraces the Social Laws of Economics. It tells all that happens in consequence of the one fact that society has organized itself for Production. The term Distribu-

tion cannot be used as the title of a scientific division, if the use of it carries with it the idea that what is treated under this title is not Production and is not Exchange. Distribution is a process that, in its completeness, includes Exchange. It falls itself entirely within Production. It is not best to characterize the second natural division of economic science as the science of Distribution. since the idea of distinctness from Production and Exchange attaches itself, in the public mind, to this term. It is best to describe it as the division that treats of the Social Laws of Economics, as distinct from the general laws. When we know what happens in consequence of the economic actions and reactions that are taking place between man and nature, we have the content of the first division of the science. We need, further, to know what takes place in consequence of relations between man and man; and this will give us the content of the second division.

It is conceivable that production might go on in an organized way, without any change in the character of the operation. Men might conceivably produce, to the end of time, the same kinds of goods; and they might do it by the same processes. Their tools and materials might never change; and they might not alter, either for the better or for the worse, the amount of wealth that their industry would yield. Social production can be thought of as static.

In such a changeless mode of social industry, distribution, with all that it involves, would take place. Groups would exchange products, and each would be dependent on the value of its own goods for the amount of its collective income. The price of agricultural produce would determine the income of farmers, and the price of ore would fix that of miners. The gains of a group as a whole would be divided among the sub-groups composing it, and would then, by a further operation, be parted into wages, interest, and profits.

We saw that what are called natural standards of values, and natural or normal rates of wages, interest, and profits, are, in reality, static rates. They are identical with those which would be realized if a society were perfectly organized, but were free from the disturbances that progress causes. Far more than classical economists were aware of is involved in a thorough-going study of what they called natural values.

Reduce society to a stationary state; let industry go on with entire freedom; make labor and capital absolutely mobile.—as free to move from employment to employment as they are supposed to be in the theoretical world that figures in Ricardo's studies,—and you will have a régime of natural values. They are the values about which rates are forever fluctuating in the shops of commercial cities. You will also have a régime of natural wages and interest; and these are the standards about which the rates of pay for labor and capital are always hovering in actual mills, fields, mines. The terms, "natural" and "normal" and "static," as used in this connection, are synonymous. The division of economic science that presents natural standards of values, wages, and interest, ought consciously to take the shape of a static theory. Such a theory would treat of Distribution as it would go on if there were taking place none of those grand disturbances - changes in the mode of production -that are forever causing market quotations to vary from the natural standards of the classical economists.

A static state is imaginary. All actual societies are dynamic; and those that we have principally to study are highly so. Heroically theoretical is the study that creates, in imagination, a static society. Unceasing changes in the actual world thrust labor and capital, from time to time, out of one occupation and into another. In each industry that is carried on they again and again change the modes of production, and the kinds and the quantities of

the goods produced. Yet this does not invalidate the conclusions of a static theory. Static laws are real laws. The forces that would work in a world that should be held in a fixed shape and made to act forever in a fixed manner operate still in the changing world of reality. We can always see them working in connection with other forces; but we can only imagine them working alone. We study them separately, in order that we may understand one part of what goes on in dynamic societies. To do this, we create in imagination a static society; and it is a heroic but necessary application of the isolating method.

Only by reasons of its omissions is the imaginary and static state unlike the real and dynamic one. All the forces that would work in the unchanging world are not only working in the changeful one, but are even the dominant forces of it. They do not keep values exactly at the natural standards; but they keep them fluctuating about those standards, and they keep real wages and interest always comparatively near to the natural rates.

We have described the boundaries of two of the natural divisions of economic science. The first treats of universal phenomena, and the second of phenomena that result merely from organization, and not from any change or progress in the character of the organization. Starting with those laws of economics which act whether humanity is organized or not, we next study the forces that result from organization, whether it is progressive or not. This latter study gives us a theory of Social Economic Statics.

Finally, it is necessary to study the forces of progress. To influences that would act if society were in a stationary state, we must add those that act only as society is thrown into a condition of movement and disturbance. This will give us a science of Social Economic Dynamics. It will bring the society that figures in our theory into a condition that is like that of the actual world. It will

supply what a static theory openly and intentionally puts out of sight; namely, changes that alter the mode of production, and act on the very structure of society itself. A study of these changes is the content of the third natural division of economic science.

Wants are changing, and the kinds of wealth that are produced must change with them. New mechanical processes are coming into use. Machines supplant hand labor, and efficient machines displace inferior ones. New motive powers are taken into service, and new raw materials are used. Population increases and migrates, taking with it some of the increase of its wealth. Large industries grow up and crowd small ones out of the field. The earth becomes crowded with life and wealth. An adequate study of such changes is impossible unless it is preceded by a study of natural or static standards of value, wages, interest, and profits.

Not any of these changes suppresses the action of static forces, nor do all of them together do so. Not one jot nor one tittle shall fall from the law of natural values, or from that of natural rates of wages, interest, and profits. A different set of forces is acting in connection with the static ones; and real values, wages, are the resultant of the two kinds of force. In advancing to the study of dynamic phenomena, our theory completes itself; and the effect is to make it fully interpret the world of fact. theoretical dynamic world is exactly like the actual world, if the theory that constructs it is a valid and complete one. It has the elements of disturbance and of friction to which men of business point, as influences that invalidate theoretical conclusions. If the study of it were carried to completion, it would furnish what has heretofore been lacking; namely, a science of economic friction and disturbance.

In so far as method is concerned, a theory of Economic Dynamics must use deduction, as did the theories of the Ricardian school. It must base itself on the conclusions of Economic Statics, which, as we have seen, are uncompromisingly theoretical. Yet realism is the striking trait of the dynamic theory. It includes in its field of view just the elements that have been needed to make a deductive economic science fully interpret the world of fact, and satisfy practical minds.

In the markets of all parts of the world where competition rules the standards about which prices fluctuate are set by static forces; and the fluctuations are accounted for by dynamic ones. Actual prices are now above the standards, and now below them. A pendulum is now on one side of an imaginary vertical line, and now on the other. The vertical line coincides with the position that it would hold if it were under the influence of static forces only. Its oscillations are due to dynamic forces: and these can be measured if we first know the nature of the static forces, and the position to which, if they were acting alone, they would bring the pendulum. oscillations of prices about the natural standards can be accounted for only by a similar plan of study. We must have, at the outset, the static standards of price to which the market tends to conform. The same thing is true of natural wages and interest, and of the fluctuations about these standards. It is dynamic causes that produce variations.

This, however, is not the largest effect of dynamic forces. We shall not have learned the most important thing about them when we have accounted for the deviations from natural rates that actual values, wages, and interest show. We shall further see that dynamic forces create new conditions in which static forces must work. In these new conditions natural values cannot continue to be what they were in the former conditions. The price of cotton cloth that is entirely natural, when this fabric is made by hand, is far from being so when it is made by

machinery. The normal price of cotton cloth fell in consequence of the inventions of Watt, Hargreaves, Arkwright, and Crompton. Before these men did their work, the price of the cloth was fluctuating about one natural standard: afterwards it fluctuated about another. normal level of wages is rising, and that of interest is falling, in consequence of far-reaching dynamic influences. At any one time there is one standard of value, wages, and interest set by static forces; and at that time the temporary fluctuations of actual rates about these standards are due to dynamic causes. At a later time it will be found that the standards themselves have undergone a change; and these grander effects are the most important ones that are attributable to dynamic forces. A theory of mere disturbance and variation is, indeed, included in the science of Economic Dynamics; but the more important thing that is included in it is a theory of progress. The normal wealth of the world will be greater and the natural level of wages will be far higher in the year 2000 than they are to-day, if the greater forces of economic dynamics shall continue to work.

Is it not already clear that this field of investigation is an indefinitely fruitful one? It would become clearer that this is the fact if it were practicable here to describe, in a detailed way, the particular problems that have to be solved in a theory of Social Economic Dynamics. They include every possibility of gain that can come to humanity by economic change. They are essentially new problems, because the prevailing mode of economic study has not heretofore isolated them, brought them clearly into view, and afforded the data for solving them. Not without references to change and progress has been the theory that has formed itself on the old and baffling plan of a fourfold division of the whole science into Production, Distribution, Exchange, and Consumption. Statics and dynamics are blindly commingled in such theories. An

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adequate treatment of change and progress is needed; and it must be preceded by a thorough-going treatment of purely static forces. We must get the normal standards of value, wages, and interest, if we are to measure the deviations from them that rates show in the business world. What is far more important is that we should have the natural standards of to-day, compare with them the standards of to-morrow, and measure and account for differences between the two sets. The reduction of progress to a science,—such is the work of a theory of Social Economic Dynamics.

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THE GAS SUPPLY OF BOSTON.

II.

In a previous article * I gave an outline of the steps leading up to the placing in trust of a majority of the stocks of four of the gas companies in Boston, and the issuing of the Boston United Gas Bonds. To understand the subsequent history of these companies and their relation to companies not in the trust, it will be necessary at this point to enter somewhat more fully into the details of the trust agreements, dated January 1, 1889.

As already indicated, the trust was made broad enough to include all the companies in the vicinity of Boston, provided they could be brought under control at advantageous prices. Therefore, the agreements were drawn to cover the stocks already contracted for, and at the same time to provide for the possible purchase and deposit of the other stocks. At the time the trust agreements were executed but four of the companies were actually under control of the trust; namely, the Bay State, the Boston, the South Boston, and the Roxbury companies.

The trust agreements set forth that the owners † had agreed to purchase 4,800 shares of the stock of the Boston Company, 5,800 shares of the stock of the Roxbury Company, and 8,900 shares of the stock of the South Boston Company, and that, if they could do so at favorable prices, they proposed to buy the remaining shares of the stock of these three companies and all the stocks of the Charlestown, the Chelsea, the Dorchester, the East Boston, the

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[†] For the sake of brevity the three parties to these agreements will be designated here as they are in the texts of the agreements: Messrs. Addicks and Dillaway as the owners (of the stocks), the Mercantile Trust Company of New York as the trustee, and the Bay State Gas Company of New Jersey as the Gas Company.

Jamaica Plain, the Malden and Melrose, the Newton and Watertown, the Waltham, the Brookline, and the Cambridge companies.

The agreements further declared that the owners required \$12,000,000 to enable them to pay for these stocks, and desired to raise this sum by issuing certificates to that amount and pledging the stocks for the payment of the certificates, and that the Gas Company had agreed to issue its bonds for the amount required, and the trustee to indorse its certificates upon the same, upon the conditions set forth in these agreements. As already stated, the collateral trust bonds were to bear five per cent. interest, payable semi-annually, to run fifty years, and were payable in gold. The times, methods, and conditions of issue, so far as they concern our present purpose, were as follows. The Gas Company agrees to deliver its first series bonds for \$12,000,000 to the trustee, who will indorse his trust certificate upon them. Then, upon the payment by the owners to the trustee of \$322,380 in cash and the delivery to the trustee of the shares already contracted for, the trustee will deliver to the owners \$7,000,000 of the first series bonds. This issue of \$7,000,000 was based on an estimate of the entire capital stock of the companies concerned. The cash payment was to furnish a source from which the trustee could pay for the minority shares as the owners purchased and deposited them, as they reserved the right to do at prices fixed in the agreements.

These \$7,000,000 in bonds were actually delivered to the owners in the summer of 1889*; and, apparently, all but about \$1,000,000 of them were floated in London. This is supposed to be the source from which the money came to pay for the stocks of the Boston Company.

*It will be recalled that the contract by which the owners got control of the Boston Company is dated March 26, 1889. On July 31, 1889, the New York Exchange listed \$5,000,000 of these bonds, and voted to list the other \$2,000,000 as soon as they should be issued by the trustee.

\$3,000,000 of the remaining \$5,000,000 of the first series was to be issued in sums of not less than \$1,000,000 at any one time upon the deposit of a majority of the stocks of any of the other companies named, in sufficient quantities, at prices fixed in the trust agreements in each case. It is, perhaps, needless to say that the object of the trust would be defeated if bonds should be issued upon the stocks of any company before a majority of the stock of the company was deposited. The owners afterwards succeeded in getting control of one of the smaller companies,—the Dorchester. But the holders of gas stocks generally asked such high prices that these "owners" were never able to procure shares in sufficient quantity, at advantageous prices, to deposit them under the \$1,000,000 rule. sequently, no other companies have ever been brought under the terms of these agreements; and the stocks of the 'Dorchester Company were held as an asset of the Bay State Company of Delaware, which these "owners" control.

The remaining \$2,000,000 of this possible issue could be put out under either one of two conditions: First, by the deposit by the owners with the trustee of any bonds or stocks which, in the opinion of Brown Brothers (bankers) of New York, justified such an issue, the trustee might issue \$1,000,000 more of the bonds. Second, if, in the opinion of the same referees, the value of the property represented by the stocks already in trust should, because of improvements, justify it, the trustee might issue bonds to represent such increased value. Under this last provision, additional issues have from time to time been made, amounting in all to \$1,000,000.

Still further, when the legislature of Massachusetts in 1898 destroyed and caused to be cancelled the obligation for \$4,500,000, it allowed the Bay State Company of Massachusetts to issue additional stock to the extent of \$1,500,000, bringing the stock of this company up to \$2,000,000, the value of the property of the company at

that time as judicially determined. The trust agreements allowed the Bay State Company of Delaware, which received this additional stock of the Bay State Company of Massachusetts in exchange for the obligation, to deposit the stock with the trustee. Thereupon the trustee issued \$1,000,000 of Boston United Gas Bonds, first series. This brought the total issue of this series up to \$9,000,000, the amount now outstanding.

The agreement for the issue of \$4,000,000 second series Boston United Gas Bonds is of even date with the other. and offers but little of interest in this connection. It is, in general, the same as the agreement for the first series, except that the second series is subject to the first series as a prior lien. After setting forth that the owners needed \$4,000,000 additional money to complete the transactions referred to in the first agreement, provision is made for this issue. Of the \$4,000,000 the trustee agrees to deliver \$3,000,000 with the first instalment of the first series. So much was done. The remaining \$1,000,000 has never been issued; for this portion of the issue was made dependent upon the deposit of a majority of the shares of the Cambridge Company, and the holders of the stock of that company have never been willing to sell at what the Bay State interests regarded as reasonable prices. This gives, therefore, a total issue of the trust certificate bonds of \$9,000,000 first series and \$3,000,000 second series,—the maximum amount ever put out, and all still outstanding.

The trust agreements expressly provide that nothing shall ever be done under them to hinder in any manner any one of the corporations from fulfilling all of its corporate duties to whomsoever owed. The trustee agrees at all elections of directors to vote for persons whose names are suggested by the owners, and, in the absence of any such designation, to vote for persons whose names are suggested by at least one-third in interest of the certificate

holders, and, in case it becomes necessary, agrees, further, that he will transfer a sufficient number of shares, not exceeding ten, to qualify any such person for the office of director. The owners bind themselves, their assigns and the directors elected upon their nomination, never to place liens, mortgages, or floating debt upon the property of the companies, and never to allow the capital stock of any of the companies to be increased except upon condition that such portion of the new shares be deposited with this trustee as to make the proportion of all the stock in trust as great as at present. The owners further bind themselves to sign and execute any other contracts or agreements necessary, or deemed necessary by the trustee, to carry out all the purposes of the trust. In case of the alienation of any real estate or other property of any of the companies, the proceeds of such sale must be applied in full to the purchase of other similar property needed by the company, or be handed over to the trustee, to be applied to the sinking fund to pay the principal of the trust certificate bonds.

Upon these terms the trustee agrees to receive from time to time all dividends and profits upon the stocks deposited, and, after deducting his own compensation, together with all taxes and other expenses of administering the trust, to provide a sinking fund sufficient to pay each year, after 1894, an amount of the principal of the debt equal to at least one per cent. of the total debt created by the trust. After all of these payments are made, the trustee agrees to apply the remainder of the profits of these stocks first to the payment of the interest in full of the trust certificate bonds, and then to deliver to the owners any surplus remaining in his hands. The owners on their part agree at any and all times to make good any deficits that may arise in the funds necessary to meet all the above payments, and to carry out in full any and all other purposes of the trust.

Careful provision is made for closing up the trust in case of default in interest or sinking fund. If any interest coupon remain due and unpaid for three months, the trustee may, and upon the request of the holders of one-fourth in amount of the certificates must, declare the principal of the debt due; and, if for any reason, at any time, the principal remains due and unpaid for a period of thirty days, the trustee may, and upon the request of one-fourth in interest of the certificate holders must, proceed to sell the stocks and property held in trust by him for the benefit of all the certificate holders, equally. But all the stocks must be sold together in one block. The trustee, upon the request of the holders of one-fourth of the certificates in amount, is required to bid in the stocks at such sale on behalf of all the certificate holders; but the price paid shall not exceed the amount of certificates then outstanding.

Elaborate provision is made for replacing the trustee in case of removal or resignation. The trustee is removable by the certificate holders at any meeting duly called for that purpose, provided a majority of those present vote for such removal, and that such majority represent at least one-tenth in interest of the certificates.

As already indicated, the owners, even before the execution of the trust agreements, but really as a part of the trust arrangements, had entered into contracts to sell all their interests in the stocks of the Boston gas companies to the Bay State Gas Company of New Jersey. This sale was subject only to the terms of the trust agreements, which at that time had been drawn and were merely awaiting execution. The consideration given by the Gas Company for these stocks consisted of: (1) paid-up capital stock of the Gas Company to the amount of \$995,000, being all but \$5,000 of the capital stock at that time authorized; (2) \$5,000,000 additional stock of the Gas Company when the capital stock should be increased to \$6,000,000, such increase having already been planned, being authorized by

vote of the directors on July 10, 1889; (3) the complete issue of the trust certificate bonds, first and second series, as provided in the trust agreements. For these considerations Messrs. Addicks and Dillaway assigned to the New Jersey Company all their right, title, and equity in the stocks of these four Boston gas companies. It will not escape observation that by this sale these private "owners" became the corporate "owners" of virtually the whole stock of the New Jersey Company, which, of course, by this contract assumed all the obligations of the owners under the trust agreements. The first series of trust certificate bonds was protected by allowing the holders of these bonds to attend all meetings of the stockholders of the Gas Company, and to vote at the same at the rate of one vote for each \$200 in bonds. The proportion of the total voting power of the company granted to these bondholders was to be maintained in case the company issued additional stock or gave voting power to any other securities. This provision was not likely to throw the balance of voting power into the hands of the bondholders. For it was based on a share capital of \$6,000,-000, all held by the same parties, who could, by a very small holding of bonds, control the action of the company, even if the whole \$12,000,000 of first series bonds should be issued. But it was highly improbable from the first that so large an amount of bonds as \$12,000,000 would ever be put out.

In August, 1889, Messrs. Addicks and Dillaway entered into a contract with the Bay State Gas Company of Delaware, by which that company acquired the \$995,000 of stock in the New Jersey Company, together with any additional stock to be issued under the agreement of March 18, 1889, as well as all the other rights, title, and interest of Messrs. Addicks and Dillaway in that agreement.

This particular chain of contracts, in which these two

persons, acting as one party, were contracting with themselves, was brought to a close by an agreement between the Bay State Gas Company of New Jersey and the Bay State Gas Company of Delaware, under date of April 9, By the terms of this contract the New Jersey Company assigned all its rights, title, interest, and equities in the Boston gas stocks and in all the above-mentioned contracts and agreements to the Delaware Company, which in its turn, of course, assumed all the debts, agreements, contracts, and obligations of the New Jersey Company. The Delaware Company thereby became responsible, among other things, for the principal and interest of the trust certificate bonds. The nominal consideration given by the Delaware Company, as appears from the face of the contract, was (1) the sum of \$150,000 which the Delaware Company had previously lent to the New Jersey Company, and (2) one-tenth of 1 per cent. on the share capital of the New Jersey Company for the time being, plus \$1,000, both to be paid annually on January 1. This payment was apparently required for the purposes of meeting the expense of maintaining the corporate organization, and possibly for paying some corporate salaries.

It will be observed by one who has followed all the previous steps that Messrs. Addicks and Dillaway, whether contracting under one name or another, have always as a single party represented both sides in every contract. With the closing of this last-mentioned contract, we reach, after a multiplicity of such contracts covering a series of about six years, a comparatively simple stage in these affairs. To sum up the situation, we find a majority of the stocks of four of the Boston gas companies held in trust for the Bay State Gas Company of Delaware, which stands bound to pay the interest and principal of \$12,000,000 of trust bonds as well as all other expenses of the trust. This Delaware Company has also complete control of all the subsidiary companies, and of

the obligation for \$4,500,000 issued by the Bay State Gas Company of Boston, and, as such owner, is entitled to the dividends and interest that may be drawn from the same.

Let us now retrace our steps a little, to see what the Boston Gas Syndicate cost. The trustees of the Syndicate received each a salary of \$2,500 per year, and, jointly, 2 per cent. commission on all the funds disbursed by them. The cost of putting the stocks in trust up to April 11, 1889, according to the books of the Syndicate, amounted, in all, to \$277,712.82, divided as follows:—

Commissions									\$188,461.50
Salaries .									66,657.65
Office expendi	ita	re							16,301.02
Legal expense	86								6,292.65
Total .									\$277,712.82

It may be remarked, in passing, that this is equal to 6.62 per cent. on the share capital of all the companies now in the trust, including the Bay State Company, which was not in considerable operation until after July 1, 1890. If the Bay State Company be excluded, it makes about 7.84 per cent. on all the stocks involved. From another point of view, this item amounts to a little more than 69.2 per cent. of the net earnings, or 82.5 per cent. of the total dividends paid in 1887† by all the companies concerned.

The trust may fairly be said to have been completed with the listing of the first portion of Boston United Gas Bonds on the New York Stock Exchange, July 81, 1889. The par value of the stocks of the combined companies

^{*} The commissions were on disbursements irrespective of the source from which funds were obtained. This item, therefore, includes a commission of \$9,142.50 on the stock of the Dorchester Company. The stocks of this company were deposited as collateral for the purchase money for them at \$125 per share. The equity in them, as already indicated, belongs to the Bay State Gas Company of Delaware.

[†] The accounts of all Massachusetts gas companies are, by law, closed on June 30 of each year. All references are to fiscal years, ending on June 30 of the year named, unless calendar years are specifically mentioned.

was \$4,040,000, with minority shares, to the extent of \$52,000, in all remaining outside the trust. The companies had at that time quick assets estimated at \$1,000,000, with no indebtedness except the obligation for \$4,500,000 of the Bay State Company and a floating debt of about \$50,000 on the South Boston Company.

As a basis for future discussion, it seems desirable, even at the risk of repetition, to digress somewhat, in order to consider more fully the probable cost of the works of the Bay State Company of Massachusetts. I make no pretensions to any exact knowledge on this point. The estimate of \$750,000 (apart from patent rights, carried on the books at \$250,000*) was avowedly put forth as an estimate only, based, however, on all available evidence. Certainly. no other point was more seriously considered in the investigation of 1893 than this one. The opponents of the company put two expert witnesses on the stand, who agreed substantially on a figure somewhat less than that given above. The president and chief counsel of the Bay State Company, who were at the same time also president and chief counsel of the Construction Company that built the works, wished the impression to prevail that the property cost the Construction Company from \$2,000,000 to \$3,000,000. But they refused absolutely to produce the books and accounts of the Construction Company, which were beyond the jurisdiction of the committee, being out-

* These patents seem to have come into the possession of the Bay State interests, partly as a bonus, or part consideration of the price of \$150 a share, paid by the Boston Gas Syndicate for the stock of the South Boston Company in 1887, and partly by sale or assignment to the Bay State Company by the Beacon Construction Company, July 25, 1885, for \$250,000 of certain patents procured from the Gas-works Construction Company. The patents appear later to have been held in the name of the Syndicate, the Bay State Company of Boston, or the Bay State Company of Delaware, as suited the convenience of the interested parties. Of this asset, Mayor Matthews said, after examining all the books and accounts of the company, "There is not an entry on the books of the Bay State Gas Company of Massachusetts to show that they ever paid a dollar for patents"; and, again, "There are patents in their assets, but there is nothing in their books to show that they ever paid a dollar for them." Investigation of 1893, p. 460.

side the State. These would have been conclusive evidence on the point, and of course would have been produced if those in charge of them had deemed it in their interest to produce them. The Bay State interest not only refused to produce this conclusive evidence in their hands, but also declined to call any expert witnesses, although they had such a witness at the investigation, to be used in case of an emergency. When the president and chief owner of both the Gas Company and the Construction Company was on the witness-stand, he insisted that his memory was a complete blank as far as the cost of the works was concerned. While, therefore, it has never been demonstrated that the Bay State works did not cost more than \$750,000, it is indisputable that those pretending that they cost something like \$3,000,000 preferred that the only evidence submitted to the committee should go to show that they cost less than three-quarters of a million dollars rather than to have the exact cost known.

These facts, under all the circumstances, and especially in view of the well-known leniency of the American public towards over-capitalization in moderate quantities, establish a strong presumption against a cost greatly in excess of the estimate already given. To these considerations should be added, for what they are worth, the figures from the various sworn returns made by the company to the State. It should not escape notice, also, that the pretence that the works cost between \$2,000,000 and \$3,000,000 was never put forth by the interested parties cognizant of all the facts in the case as a specific statement of truth, but as an ambiguous suggestion or insinuation. For example, when the attorney for the company in his argument in 1893 came to discuss the evidence on this point, he confined himself wholly to making an attack upon the character of the witnesses as experts and to impugning, in general, the motives of the prosecution. At this point he also came dangerously near to an admission that the claim of the opposition was correct when he said.* "It is conceded, and the evidence before you shows, that the gas plant did not cost the contractors who built it \$4.950,000 in cash.† It is claimed upon the one side that it cost less than \$1,000,000; and it is claimed by us that upon the evidence, if it is material to be considered at all, it cost between two millions and a half and three millions of dollars in stocks and bonds." † In another place he says, "The worst view that can be taken against the company shows that they [the works] must be taken to have cost, without estimating the patents, over one million dollars." Some light is also thrown on the estimate of \$3,000,000 by the evasive testimony of Mr. Samuel Little, one of the trustees of the Syndicate. On the witness-stand, he declared the plant of the Bay State Company worth three million dollars. He was then asked the following question: "When you say it was worth three million dollars, you mean, if you could have the gas plant to work with the franchises and everything connected with it, that you could earn an income on three million dollars?" To this he answered, "Yes, sir." Reference should be made at this point to the petition to the New York Stock Exchange to list the first series of trust certificate bonds, which is interesting also, as showing us on what vague and indefinite statements the public is expected to invest in securities. This document, after describing the stocks on which the bonds are based and stating with substantial accuracy how much had been paid for them, about eight and one-half million dollars, adds: "The Bay State Company of Massachusetts has built the finest water gas works in the country, which have been valued at \$3,000,000. The cash cost of the property underlying these \$7,000,000 of bonds is therefore considerably over \$10,000,000, and the properties are worth an earning capacity very much beyond their cost." As a matter of fact, the property of this company

^{*}Investigation of 1893, pp. 511, 524. † The Italies are not in the original.

was assessed May 1, 1889, at \$501,300; and the only other valuation put upon it up to that time was by its owners for advertising purposes. It is true that four and onehalf years later, after considerable additions had been made to the plant, when the legislature wiped out the obligation for \$4,500,000, the value of the works was judicially appraised at \$2,000,000. The present writer has no data for estimating the value of the additions referred to. The character of the commissioners of the court which fixed this valuation was entirely above reproach or suspicion. The commissioners were instructed not to include any value for the franchise; yet, so far as I can find out, they had to place a value upon these works without having access to the books and accounts of the Construction Company that built them. At that time the companies were actually combined, and the act under which this valuation was made was conclusive evidence that it was not the intention of the legislature to interfere further with the combination to the injury of the stockholders. But every one knows that the property, so managed, was worth very much more than the same property would have been with each company acting independently.* Furthermore, the commissioners were appointed to determine "the actual market value of said company, . . . not including therein any value for its franchises," and not the original cost of the property to the Construction Company. Is it not possible, therefore, that the valuation of \$2,000,000 placed upon the property October 30, 1893, was much higher than the same commissioners would have placed upon exactly the same tangible property if the earning power of the company had been much less

^{*}Those in control of the combination estimated that operating the companies in harmony would save \$200,000 in the expense per annum. This estimate is not based on the supposition that the companies, if not combined, would be engaged in actual competition, but rather that they would be operated separately with a division of territory, as was the case before the combination. Investigation of 1893, Appendix, p. lxxii.

than it was because of actual or prospective competition with the other companies?*

Let us return from this digression. In the light of all the evidence we must conclude that those in control of the combined companies had at that time invested in the enterprise (at what to many people, it is true, seemed exorbitant prices) somewhere between nine and ten million dollars when, upon such a property they planned an issue of \$17,000,000 of foreign, or extra-state, capitalization. They were well aware that the three active companies occupying the whole field now held by the combination paid in dividends for the three years 1886–1888 a

* The tax assessors in Boston are generally supposed to live reasonably up to the law requiring them to assess all property at its fair market value. If the judicial valuation of \$2,000,000 on the property of the Bay State works was not excessive, it seems strange, especially after the hostility against the company created by the investigation, that the company should have succeeded in keeping its tax assessment so low as it did for so many years afterwards. Remembering that until November, 1893, the Bay State Company had \$500,000 share capital and the \$4,500,000 obligation, and after that date had \$2,000,000 of share capital and no debts, and that during the whole period under consideration the Boston Company had \$2,500,000 in share capital and no debts, let us make a comparison of the value of the property of the two companies for purposes of taxation. The figures will be doubly interesting, when we come to discuss the earnings of the two companies, if we add the dividends and interest to this table. The assessments are as of May 1, each year; the dividends and interest for the fiscal year ending on June 30, in each case. The figures are as follows: -

Year.	,				Valuation Bay State Co.	Valuation Boston Co.	Dividende and interest Bay State Co.	Dividends Boston Co.
1886					\$76,000	84,124,900		\$250,000
1887					202,000	4,269,100		250,000
					202,000	4,269,100		250,000
1889		:			501,800	4,269,100		267,000
1890					526,300	4.351,000	\$100,000.00 a	250,000
1891					526.800	4.855.800	500,000.00 4	187,500
1892	:		:		631,500	4,457,200	450,000.00 *	250,000
1898	:				661,500	4,516,900	487.500.00 4	250,000
					661,500	4,548,400	881,232,87 b	250,000
	:		:		821,500	4,548,600	170,080.00	287,500
1896	:		:		1 000 KAA	4,556,800	200,000.00	225,000

<sup>The figures are taken from the annual reports of the Gas Commission. They differ slightly from those given in the Report of the Investigation of 1893, pp. 47
and 54. The probability is that those given above are correct. Cf. note, p. 41.</sup>

^b In this case I have not the data at hand to distribute the dividend threughout the year. Therefore, taking the total paid on the stock for the year, I assume that the dividend was uniform and that the obligation for \$4,500,000 drew interest at the same rate for the exact portion of the year it remained outstanding.

total of but \$947,000, or an average of \$315,666 per year; while to pay the interest on the trust certificate and income bonds at the agreed rates and 5 per cent. on the stock of the Delaware Company would require about three times this amount, or \$890,000 per year.

No statute forbade the raising of the price of gas to the public, or the distributing of more than 10 per cent. dividends regularly on the stocks of the Boston gas companies. But those who formed the combination did so with the full knowledge that a tradition stronger than any statute fixed 10 per cent. as a general maximum dividend, and that, having gained admission to Boston solely on the strength of the promise to give the public cheaper gas, it would be impossible to raise materially the price of gas in Boston at a time when gas prices everywhere else were rapidly declining. It was perfectly plain to everybody concerned that any attempt to raise the price would cause appeals to the legislature and the Gas Commission for investigation, regulation, and lowering of the price of gas.

Therefore, if those who brought about the "harmonious relations" of these companies were to reap anything more than large personal salaries and counsel fees as a result of their years of effort, two things were necessary: first, a great increase of net earnings from the use of water gas and economy of administration; and, second, a turning of all the surplus earnings of all the companies into the treasury of the Bay State Company of Massachusetts, to go to the treasury of the Bay State of Delaware in the guise of interest on the \$4,500,000 obligation, and then to be transformed once more into the form of interest and dividends on the foreign capitalization. It now becomes

^{*} The annual salaries and directors' allowances of the four combined companies were in 1887 but \$18,300. After the consolidation they rose to \$60,930. I have not the data at hand to apportion this among the different officers; but the salary of the president, who was of course the chief owner, was \$25,000. It was said by opposing counsel, and not denied, that the brother of the president received also \$25,000 as treasurer of all the companies; but this seems improbable.

plain, if we take into view the statutes and also the traditions of Massachusetts, why this multiplicity of companies had been necessary, and also what the exact function to be performed by the obligation for \$4,500,000 was. If the net profits of all the companies did not exceed 10 per cent. on the share capital, allowing for the dividends on the minority shares, there would be but \$398,700 to pay interest on the Boston United Gas Bonds, leaving an annual deficit on this account alone of \$101,300, with nothing whatever for the stock and bonds of the Delaware Company. The problem was, therefore, virtually to triple the earnings from this gas field, and to turn all the surplus into the Bay State treasury.

Even before the technical completion of the trust, the diversion of surplus began. The Boston Gas Syndicate declared an extra cash dividend of \$150,000, or 25 per cent., on the stock of the Roxbury Company on February 19, 1889, and thus got rid of the accumulated cash of that company.

When the companies had been brought into harmony, they elected substantially identical boards of directors, and moved the business all into one set of offices, as soon as practicable, in view of unexpired leases and contracts. The next step was to sell water gas patents to the subject companies. On this account the Bay State interests took from the treasury of the Boston Company \$150,000, from that of the Roxbury Company \$50,000, and from that of the South Boston Company \$25,000. The whole history of the Bay State Company shows that when its directors sold to themselves, as directors of the other companies, these licenses, or patent rights, they had no intention of allowing these companies to make any use of the rights, but fully intended to manufacture gas in the Bay State works, and sell it to the other companies as soon as the Bay State plant was capable of supplying the demands of the field. It will be recalled in this connection that the

Bay State Company sold no gas to consumers until about July 1, 1891, and that, having in all less than sixteen miles of street mains, its sales to consumers since have necessarily been insignificant. As a matter of fact, the Roxbury company ceased to manufacture any gas whatever before it bought the rights, and its plant remains shut down to this day. For the vote of the directors authorizing the purchase of the rights was passed on April 24, 1890; while a committee of the directors was appointed June 20, 1889, to consider the advisability of closing the works and buying gas of "some other company." Upon the recommendation of this committee, such purchase of gas was authorized July 12, 1889, or nearly a year before the purchase of the patents. closing down of the works was a gradual process; and it was not until about July 1, 1892, that the works of this and the Dorchester Company were completely and permanently closed down.* The Boston Company made no attempt to manufacture any water gas until April, 1893, when the increasing demands of the field had outrun the capacity of the existing plants. The attempted justification of this sale of patents by the Bay State party to those under its control appears in large measure untenable. The claim put forth was, first, that the corporations had to be kept legally separate, and that each one had at all times to be prepared, in case of necessity, to act independently; and, in the next place, that the companies could not distribute water gas made by the Bay State Company without these patents. This last point has never been adjudicated; but, so far as the present writer has been able to ascertain, the patents are all for some manufacturing process, and it is difficult to see why any license should be necessary to distribute gas legally made by these patent processes and once sold.

 The South Boston Company continued to manufacture coal gas longer than any other of the captive companies. It has made no gas of any kind since the middle of 1895.

The inter-company sales of gas furnish one of the chief means of accomplishing the main object of the Bay State Company, and, therefore, demand our careful attention. It should be borne in mind that, although the Bay State works were tested as early as December, 1887, and, although the contract for constructing them was accepted as completed in March, 1889, the company had no right to distribute the only gas it could manufacture until after the act of 1888. In fact, the act of 1888 merely authorized the Gas Commission, under certain conditions, to license the distribution of gas containing more than 10 per cent. of carbonic oxide, and the Bay State Company took out no license under the act. When in the spring of 1890 the legislature formally repealed the 10 per cent. limit, and thus for the first time opened the way for the unrestricted sale of water gas, the Bay State Company was still a financial, and not a manufacturing company. At this time, moreover, it had no distributing system whatever. could not, therefore, before this time have done any gas business, even in the absence of legal prohibitions, until it had command of the distributing systems of the other companies. The manufacturing operations of the company may be said, practically, to have begun after the act of 1890.* This is about a year after the completion of the trust, and more than a year after the work of the contractor was accepted as complete. For, although the specifications called for a manufacturing capacity of 4,000,000 cubic feet of gas per day, or about 1,250 to 1,460 million feet per year, the company, with full control of the other

* It is true that before the act of 1890 the Bay State Company had sold in all about 161,000,000 feet of gas to the other companies, which mixed coal gas with this water gas and distributed it to their customers. It is understood that this mixture contained regularly more than 10 per cent. of carbonic oxide. But the companies became liable to a penalty under this prohibition only, if their gas contained more than the legal limit of carbonic oxide "on three successive examinations." By some toleration on the part of the State administration it was easy for the companies to find out when inspections would be made, and thus continue these sales and still avoid the penalty by being within the limit at one examination out of three.

companies, had sold in all, before July 1, 1890, as stated above, but about 161,000,000 feet. Until that date the energy of the Bay State Company had been expended in perfecting arrangements with the other companies and in trying to get favorable legislation.

After the unacceptable act of 1888, authorizing the company to increase its capital stock, it turned its chief activity to an attempt to get from the legislature the right to consolidate legally, by lease or ownership, all the companies in and about Boston. In the session of 1890 it finally forced through the legislature a bill authorizing all the companies doing business in any town or city in the State to consolidate at the will of the stockholders. This bill virtually left the terms of consolidation and the amount of capitalization at the discretion of the stockholders. Fortunately for the good name of the State, Governor Brackett vetoed this bill; and the company was unable to overcome the veto in the legislature.

After more than six years of remarkable and fruitless appeals to the legislature for special legislation favorable to the company, and of legal and financial manipulation, about July 1, 1890, the Bay State Company found itself in possession of a magnificent water gas plant of large capacity, and in complete control of four other companies, with perhaps, on the whole, the most valuable field for the sale of gas in the world. The company determined, without for a moment ceasing its appeals to the legislature, to make the most of such legal rights as it already possessed. is easy to see that, if the Bay State Company were allowed to sell gas to the companies controlled by it, at its own prices, there could be no limit to its ability to turn all the profits of all the companies into the desired channel; namely, into the treasury of the Bay State Company. directors of the company assumed that they had such right; and, when it became known that they were acting on this

assumption, the chief counsel of the company said that before taking such action they procured the opinions of eminent special counsel.* whom he named, on this and all other important steps taken by their company. It will be recalled that the Gas Commission, by the act creating it in 1885, was given authority, after petition and public hearing, to fix absolutely the price of gas to consumers. But the commission took the view that this clause did not apply to sales of gas by one company to another, and that the powers of the commission gave it no authority or jurisdiction whatever over such sales. There seemed to be no other statute affecting these sales. Even if the commission had assumed jurisdiction over this matter, there could be no question that it was deprived of any initiative in the case, as it could not act directly without a petition. Although several petitions looking in this direction had been presented to the commission, no one of them had ever been pressed to a decision, all being either thrown out because of some defect or dropped at the request of the petitioners, after some sort of compromise or understanding with the company concerned.

At this time the Bay State works were declared to be the most perfect in the world. The general public understood that the expense of manufacturing water gas was much less than that of coal gas, but had no means of determining the exact degree of difference. The public also knew that the inter-company sales† of gas were going on, and was familiar with the reports of the Gas Commission

^{*}See Investigation of 1893, pp. 229, 325, where this language occurs: "Such lawyers as the late General Butler, ex-Governor Gaston, Judge Hoar, Richard Olney, George A. Bruce, Robert M. Morse, have tried in vain to find some defect, but have universally failed of success."

[†] The sales of gas by one company to another began before the formation of the trust by the sale to the Roxbury Company by the Boston Company of 1,769,000 feet in the year 1887. The fact that the Bay State Company was already negotiating for a lease of this company, and had at the time a bill pending in the legislature to authorize such a lease, may have prevented this company from making the extensions of its plant necessary to meet the demands of the field.

stating the amounts of such gas sold; but the prices charged one company by another were not made known by the commission. The jealousy and fear of the other gas companies towards the Bay State Company at the beginning of its career did not abate as the years went on, but rather increased. The constant appeals of the Bay State Company to the legislature tended to strengthen rather than to allay this feeling. The result was a constantly growing legislative and popular hostility towards the Bay State interests. This finally culminated in a joint resolution of the two Houses of the legislature, passed February 20, 1892, ordering the Gas Commission to report within thirty days to the legislature upon the relations of the Boston Company to the other companies.

The specific points covered by the order were as to whether the prices charged by the Boston Company had been raised within six months; as to what that company could manufacture and distribute gas for, and pay 8 per cent. on its capital; as to what extent the Boston Company was paying excessive rent for street mains; and as to what extent it was paying one dollar per thousand feet for gas which it could manufacture itself at less cost; and, finally, as to whether or not the Bay State Company was diverting the surplus earnings of the Boston Company into the treasury of the Bay State Company of Delaware. It was through this report, presented March 25, 1892,* that the facts in regard to the relations of the companies first reached the general public. Further investigation covering all the companies concerned was inevitable from the day this report was made public. The great investigation of 1893 was the necessary and speedy sequence. From these two reports all the important relations of these companies can be worked out. The conditions revealed by the report of 1898, however in accord with the statutes they may

^{*} Senate Document 102 for 1892. The report is also to be found in full as an appendix to the Eighth Annual Report of the Board of Gas and Electric Light Commissioners, 1893.

have been, were clearly such as the legislature, for at least two decades, had been trying to make impossible. It must have been plain to any student of the development of political sentiment or of corporate enterprises, upon reading that report, that no American public would knowingly tolerate and permit such relations to continue.

At this time the total annual consumption of gas for all purposes in the territory occupied by the Bay State interests was about 1,400 million cubic feet. The report showed that in the twenty months from July 1, 1890, to March 1, 1892, the Bay State Company sold to the Boston Company • 1,264.3 million feet of gas at one dollar per thousand feet. For the last half of the calendar year 1891 it gave a discount of \$70,000 in a lump sum; and, later, some slight but irregular discounts were allowed, bringing the total received from the Boston Company for the whole period for gas down to \$1,194,839,† and the average price down to a little less than 94.5 cents per thousand feet. No explanation whatever of these discounts is to be found in the records of the companies. No system of discounts was followed at any time. The \$70,000 is simply subtracted from the total due, under the designation "discount." It is probable that the deduction was made in order to prevent the Bay State Company from earning more than 10 per cent. on its capital stock for that halfyear, or to enable the Boston Company to pay its accustomed 10 per cent. dividend. ±

^{*} These inter-company sales of gas were in some cases apparently indirect; i.e., the Bay State Company sold to the Boston Company, and the Boston Company sold to the Roxbury and Dorchester companies. Eighth Annual Report of the Gas Commission, p. 7.

[†] These figures are from the special report of March, 1892. The records of the Bay State Company show that on June 30, 1892, some three months after this report was made, a further discount of \$41,000 was granted to the Boston Company; and a similar discount of \$4,000 was made to the Dorchester Company at the same time. These facts affect slightly the figures given in the text.

[‡] After examining all the books of these companies, the counsel opposed to the Bay State Company had this to say of the sales: "If you go and look at

Up to July 1, 1892, the Roxbury and Dorchester companies had bought 689.5 million feet of gas, the Roxbury paying one dollar net, while the Dorchester paid but eighty-five cents (with some slight discounts). The only explanation of this difference suggested, so far as the writer has been able to discover, is that the owners of the stocks of the Dorchester Company had borrowed on it at so high a rate that the earnings of the stock would not have paid the interest on the loan, had the company paid as high a price for gas as the other companies. But these companies are so small as to offer rather a speculative than a practical interest.

The treasury of the Boston Company, however, was still too fat after the sales of gas to it; and other devices for distributing the gains were sought. The gas was sold to other companies in the holders of the Bay State Company, which was so fortunate as to own the only pipes that could carry this gas to the distributing systems of the subject companies. Probably for the reasons already suggested, no charge for the rent of mains was made to the minor companies. But on July 1, 1889, the Boston Company began to use about three miles of the Bay State's connecting mains, and at the end of October of the same year about three miles more, making in all about six miles of pipe, the first cost of which was somewhat less than \$150,000. For the use of these mains the Boston Company paid the Bay State Company \$100,000 for each of the calendar years 1889 and 1890. During these two years the Boston Company bought just 891,280,000 feet of gas. The rent on the mains was, therefore, about 51.1 cents per thousand feet. This brought the price of gas

their books, you will find that the price charged for gas in 1891 and 1892 to these other companies by the Bay State Company is a mere matter of book-keeping. There is not a vote on their records saying what the price of gas shall be to the different companies. At the end of the year the book-keepin, Mr. F. P. Addicks, simply makes a calculation of what the necessity of each company is, and then makes the charges for gas accordingly." *Investigation of* 1893, p. 576.

up to \$1.511 when it reached the mains of the Boston Company.

It would have been disastrous for the Boston Company to buy all the gas it distributed at that price; for the net average price received by it from consumers was for the fiscal year 1890 but \$1.23, and for 1891 but \$1.21. At this time the company, acting independently, could make coal gas for about 58 cents per thousand. By adapting its works to water gas processes for which it owned the rights, it could manufacture very much below this figure. In fact, the Bay State Company, according to calculations made from the sworn returns of the company, was manufacturing the gas for which it was charging the Boston Company (apart from the exorbitant rent for street mains) \$1 per thousand, for about 40 cents per thousand for the fiscal year 1891, and at about 33 to 35 cents per thousand for the fiscal year 1892. Further, any statement of what it cost the Boston Company during this period to make coal gas would be meaningless without a previous explanation of its minor business dealings with the Bay State Company. For "in the spring or early summer of 1890" the Boston Company began to buy virtually all of its coal of the Bay State Company at what was officially declared to be an advance over the market price. Within about a year the net gain from this source to the Bay State Company amounted to about \$33,700. During the same time the Bay State Company made a clear gain of \$8,000 by buying tar from the Boston Company for less than the market price. To this should be added still an extra gain estimated at \$16,000 from the sale of naphtha to the Boston Company at excessive prices. Those in control of the combined companies declared that the companies were strictly private corporations; and, therefore, no law forbade them making such contracts among themselves as they wished. They attempted some justification, too, by general theorizing as to the advantages of dealing

in large quantities. At all events, it is apparent from the above facts that there was no lack of means to direct any possible surplus from the treasury of the Boston Company into that of the Bay State Company. But there was some danger that this surplus might prove inadequate to the demands made upon it. Although those in control were too wise to attempt a general increase of the selling price of gas, they found a way to add materially to the income of the Boston Company without antagonizing the popular demand for cheaper gas. In the autumn of 1887 the Boston Company, then foreseeing a war of rates with the Bay State Company, whose works were nearing completion, had authorized three year contracts, at \$1 a thousand feet, with all consumers whose bills had previously exceeded \$2,000 annually, and a discount of 10 cents per thousand feet from the regular price of \$1.30 per thousand to those whose bills had heretofore been between \$1,000 and \$2,000 per year. April 10, 1889, the directors voted "that the rebate of 10 cents per thousand feet allowed to large consumers be continued for the present." No further corporate action in regard to these prices was ever taken by the company; but consumers of the first class were charged the regular price after January 1, 1892, and those of the second class after January 1, 1891. While these discounts were in force, they amounted together to about \$45,000 a year; and their cessation probably added nearly as much as that to the treasury of the Boston Company, since the increase of price to customers of this class would not be likely to affect largely the amount of consumption. addition to income was made by a policy that tended rather to increase than to destroy popular favor. although it was a clear gain to the company, and raised the average price of gas from \$1.21 per thousand in 1891 to \$1.28 per thousand in 1892, it was justified by the company as a first step towards the "American" policy of equal treatment to all.

According to the special report made in 1892 by the Gas Commission, it had cost the Boston Company 84 cents per thousand in the holder for the coal gas manufactured by it, whereas the same gas could have been made for 53 cents per thousand but for the "harmonious" relations of the companies. The cost of distribution was placed at 24 cents per thousand, that of annual renewals and extensions at 8 cents; and at the then rate of consumption the commission declared 15 cents per thousand sufficient to pay 8 per cent. dividend on the capital actually invested. After a thorough examination of all the facts the commission concluded that the Boston Company, under the conditions of that time, acting independently, could sell coal gas to consumers at one dollar per thousand on an 8 per cent. dividend basis, whereas the combination had for several years been selling a much cheaper gas in this territory at from about \$1.21 to about \$1.28 per thousand net.

In addition to the diversion of surplus by means of the specific sales and contracts already referred to, the annual returns of the different companies in the combination show clearly that the general expense of managing the whole business was almost entirely borne by the treasury of the Boston Company.

The following table will illustrate this point, and at the same time give some idea of the general effects of the relations of the companies:—

	Flecal year.	Fiscal year.
1. Gas made in feet.	1891.	1 892.
Boston Company	861,098,100	567,771,100
Bay State Company	625,929,000	885,480,000
2. Net cost of manufacturing the same per thousand feet.		
Boston Company	60 cents	54 cents
Bay State Company	40 cents	33 cents
3. All other expenses than manufacturing, cost per thousand feet.		
Boston Company	23 cents	26 cents
Bay State Company	3 cents	2.7 cents

4.	Total expenses, exception	ng	*	nar	nu f	act	uri	ng	Fiscal year.	Fiscal year.
	cost.								1891.	1892.
	Boston Company								\$350,595.95 *	\$345,139.42
	Bay State Company								25,474.00	17,977.41
5.	Total paid in dividends	в.								
	Boston Company .								\$187,500.00	\$250,000.00
	Bay State Company .								473,494.78 †	477,000.00

It will be noticed that the necessities of the case required the cutting down of the dividends of the Boston Company to a figure unknown before for more than a decade; i.e., to 7.5 per cent. To pay so large a sum on the obligation and stock of the Bay State Company also caused the dividends on the stock of the minor companies to be reduced in some cases. The Roxbury Company, being in excellent condition when it was bought with the large cash surplus previously referred to, and with virtually no minority stockholders, continued to pay regularly 10 per cent. dividend, in addition to the extra dividend of 25 per cent. in 1889 and a 2½ extra dividend in 1890. On the other hand, the South Boston Company, with its \$43,600 of minority stock, dropped from a dividend of 6 per cent, in 1886 and 7 per cent in 1887 to 5 per cent. in 1891 and 4 per cent. in 1892. The Dorchester Company had for a number of years before the change in ownership paid 6 per cent. annually. The sale of the company within a few weeks of the close of the fiscal year 1889 probably accounts for

*This does not include rent of street mains. Since the company paid \$100,000 for the use of street mains for the calendar year 1890, it would seem that a perfectly fair comparison would require the addition of \$50,000 for rent of street mains from July 1, 1890, to January 1, 1891. From the item is naturally excluded the amounts paid for gas and in dividends.

† As the obligation for \$4,500,000 received nine-tenths of the net earnings of the company, this item includes the interest on that obligation as well as the dividends on the stock. There is a slight confusion as to the amount of the item for 1891. In the Report of the Investigation of 1893, at p. 47, the figures are \$470,000; at p. 54, those given above; while the Special Report of 1892 states that for the fiscal year 1891 the obligation paid 10 per cent. If this be true, the company must have paid that year interest and dividends to the extent of \$500,000 instead of \$473,494.78, as stated above. Cf. note, p. 28; also Eighth Annual Report of Gas Commission, p. 253.

the 9 per cent. dividend of that year. Reasons have already been given why it may have appeared desirable to maintain a relatively high rate of dividend on this small company. As a matter of fact, this company, after a 6 per cent. dividend in 1890, continued to pay 8 per cent. annually until 1896, when it jumped its dividend entirely. The cause of the apparently sudden turn in the fortunes of this company is closely related to the later history of the whole Bay State interests, which must be reserved for consideration in a future article.

Let us return now to the affairs of the Bay State Company. As a result of the manipulations and operations above set forth, it declared its first dividend of 2 per cent. on January 1, 1890, as of December 20, 1889. This was before it had fairly entered upon industrial operations. For the calendar year 1890 the company paid, in all, 7 per cent. on both stock and obligation for \$4,500,000, or \$350,000, and the next year for like purposes 8 per cent., or \$400,000, and on March 14, 1892, a further 2.5 per cent., This makes in all \$875,000 profits for this or \$125,000. company from the beginning to March 14, 1892, or within about twenty-one months after it began to make gas in considerable quantities. The high-water mark was reached for the fiscal year ending June 80, 1891, when the Bay State Company distributed on its capitalization (in dividends and interest) \$500,000, or 100 per cent. per annum on its share capital. The next year, under the influence of public opinion and legislative threats and investigation, the rate fell from 10 to 9 per cent. During this most flourishing period of twenty-one months the total sales of gas to the Boston Company were 1,348.6 million feet. Although there is some confusion in the data relating to sales to the minor companies, it appears that such sales amounted to but 42.1 * million feet to March 1, 1892.

*The figures for the Boston Company are exact; but those for the minor companies, taken from the annual reports, relate to fiscal years. The annual

On this basis the profits of \$875,000 were made on total sales of 1,390.7 million feet of gas. This gives a net profit of 62.91 cents per thousand on gas, which, according to the company's own sworn returns, cost but from 83 to 40 cents to manufacture, and which was sold in the company's holders. If this statement seems not to tally with the general selling price and cost of manufacturing previously given, it is only necessary to recall the various sources of profit possessed by this company apart from the sales of gas.

Such is an outline of the steps by which the managers of the Bay State Company succeeded in keeping the foreign stocks and bonds at high prices by the payment of a high rate of profit on the total capitalization of \$5,000,000 of the Bay State Company of Massachusetts. The obligation for \$4,500,000 seemed fully to have accomplished its purpose. With existing legislation, traditional gas prices, a constantly increasing demand for gas, and a constantly decreasing cost of manufacture, it looked in the early months of 1892 as if these dazzling profits might continue indefinitely. The marvellous success of the enterprise up to that time could not be questioned. In fact, the success was too great to be permanent. All that was needed to threaten, check, and destroy such success was that the facts should become known. For even the promoters of the enterprise could not have hoped that the legislature would refrain from attempts to put a stop to such conditions. Nor could they have rationally hoped, after the publication of the facts and details of their profits, that the companies not

reports are not clear in every case as to which company sells to the minor companies. The following statements, however, from the Eighth Annual Report, p. 7, show that the error is insignificant: "For most of the year ending June 30, 1892, these companies [the Dorchester and Roxbury] distributed a gas which they bought of the Boston Gas Light Company; but since March, 1892, they have bought directly from the Bay State Gas Company"; again, p. 252, "As the income of the Bay State of Massachusetts has been derived almost exclusively from its transactions with the Boston Company, it is fair to say that practically its entire profits are from the earnings of the latter."

in the trust would calmly sit by and see such profits go into the coffers of their great rival without an attempt to compete in so rich a field. The legal situation was such as to offer the greatest temptation to competing companies. For, as already indicated, many of the companies in the vicinity had by their charters the right to supply Boston proper with gas, provided the consent of the city be first secured.

It will be the object of a future article to trace the steps by which a knowledge of the facts delineated above became known to the public, and to describe the two lines of attack made upon the brilliant career of the Bay State Company as a result of this publicity.

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44

THE EDUCATIONAL ASPECTS OF SAVING.

In the modern trend of thought towards social meliorism there lurks a danger of impractical transcendentalism. An abounding faith in the unfolding potentialities of the human kind — where adequate room is afforded — is always in danger of developing an ultra-rational program. The faith in humanity which may be relied upon to remove mountains of social ills is that which recognizes both its unfolding capacity and its limitations. This modern winged optimism has very considerably influenced economic thinking and writing, even exceeding a mere change of emphasis.

For example, it has become fashionable to ridicule the "economic man"; that is, the ideal man who is always amenable to economic forces. It has also become fashionable to treat the Ricardian theory of wages with a superior contempt, and to refer to it as an exploded doctrine, the "normal" or "subsistence minimum" wage being treated as a phantom of the imagination,—the ghost of an ingenious theory which was never embodied in reality. The Malthusian doctrine of population has come into such bad favor as almost to amount to a renaissance of Godwin and Condorcet Utopianism. Following in this general trend away from the ground occupied by the classical economists, Adam Smith's deification of the laws of competition has been succeeded by an equally blind hostility.

Admitting the extremes to which these old landmark doctrines were carried, and recognizing the harmfulness of such doctrinal ideality, it may be a question if the extreme reaction is not the most vicious fruit they have borne. It seems, at least to the writer, that the neglect of the essential truths of these old doctrines is calculated to sap the

strength both from theoretical and institutional economics. It tends to substitute for the science of economics a sort of Utopian meliorism. The advent of the melioristic spirit is opportune, and the present epoch offers it a very large world to conquer; but a successful meliorism needs most of all to be well ballasted with some of the principles which are now passing out of favor.

The idea of the antiquation or explosion of well-matured principles should not be allowed to pass unchallenged. The notion that great thinkers, like Smith, Malthus, and Ricardo, serve only their own day and generation, is both unscientific and unhistorical. Doctrines in economics are peculiarly ill fitted for revolutionary abandonment, and such a treatment of them would necessarily be attended by great disasters. Economic theories, like doctrines of law. are in a sense immortal. They are not abandoned, but modified and adapted to changing conditions. even be said that well-established doctrines are but seldom exploded. A capricious notion may be exploded before it has fairly taken root in the thought of men, but wellrooted doctrines are seldom destroyed by the dynamite process. It may also be said that the well-rooted doctrines seldom fail to be of service, both in the day of their birth and in succeeding generations, even though they may completely metamorphose their character.

There is certainly still a service for the more important doctrines of the classical economists. It may not be going too far to say that to neglect them is to neglect the foundations of social progress. Some of them are fundamentally essential to the strength of economic thought, to a proper shaping of the growth of the state through legislation, and to the development of the best schemes for the education of the individual citizen. The "economic man" does not stand for the whole of any individual man, but he represents a phase of the nature of every normal man. Other sentiments and motives than the economic control or

modify the actions of men. But to leave out of account the goad of unsatisfied economic wants, to leave out of account the motives of acquisitiveness, and to leave out of account the social and industrial services rendered by these forces is to neglect the most elementary phenomena of human life.

Competition never possessed the social and industrial potentialities claimed for it by Adam Smith. The formulation of his claims for competition, however, impressed the public consciousness with its essential truths and created conditions for its salutary application; and the industrial revolution can perhaps best be studied with the Wealth of Nations as a starting-point.

Similarly, to leave out of account the tendency of the stream of population to overflow its banks — for people to increase in number more rapidly than nature can respond to their physical needs - is to neglect a force with which almost all meliorative schemes must reckon. Directly correlated to the Malthusian law of population is Ricardo's theory of a minimum of subsistence wage. The force of an increasing population, according to it, always tends to glut the labor market and drive wages to that standard of living where labor may precariously subsist and hold its own; not so precariously as to cause a deterioration in numbers nor so securely as to allow any increase in its number. Another downward-impelling force, similar in its effects to that with which Ricardo's name is associated, is the introduction of labor-displacing machinery. forces are identical in their effect upon labor, in that they both intensify the competition for wage service,—the one by increasing the number of applicants for positions, and the other by diminishing the number of positions. The forcing-downward tendency has been arrested by the play of other forces, but it has never been resisted without a struggle. If the contest is to continue to be successful, it is all-important that the initial force be kept distinctly in mind. We seem in no way of escaping from the following order of sequences: a tendency to early marriages and large families; a keener competition for wage service; a lower standard of living, suffering and misery. Nor are we likely for a long time to be rid of the same distresses resulting from the introduction of labor-saving machinery. Neither is this order by any means universally defeated. Hence it is all-important that meliorative schemes take the first cause—early and inconsiderate marriages—sternly into account. If this root cause can be avoided, the other evils will at least be mitigated. This is the great problem of education.

The surest way to stem the stream of social and industrial ills is to stimulate aspirations for a high degree of comfort,—for a high standard of living,—and to formulate a concrete, intelligible scheme for its attainment. A recognition of this need will suggest practical lines of educational work.

We speak of education preparing children for the battles of life. If they are really to be prepared for the battles of life, their education should both instruct them as to the character of life's battles and fortify them with definite schemes against their reverses. Here the "economic man" serves very well as a basis for mapping out educational programs. By a careful study of this manikin, the weak points in the real man may be definitely located, and an effective treatment may be devised.

Many of our meliorative schemes are likely to prove Utopian in the place where their exploiters have left them. The present meliorative movement might be described as a demand for larger opportunities for individual development, with proper developmental facilities. The two sides to the program are: more leisure time on the one hand, and inducements to healthful employment of that leisure on the other. The facilities which are expected to induce a healthful use of the greater leisure include such agencies

as free public libraries, free art collections, free public lectures, ample park and garden facilities, and, perhaps, free public concerts and operas.

These culture influences, to be provided either by the public economy or by private philanthropy for the use of the public, are expected to react upon the domestic economy. They are expected to create a hunger and thirst for culture, which will transform the home. Such schemes are Utopian in the place where they are left, because they offer wings—that is, imagination—where strong legs—that is, practical methods—are needed. The individualizing process at which education aims consists not in beholding the culture material out of which individual character may be wrought, but it consists in developing a capacity to appropriate and use that material by the individual. Here we locate the economic basis of culture.

In this day the individual discovers himself and realizes himself in the lines of expenditure. Productive processes are becoming more and more deindividualizing, and, therefore, non-cultural; social progress demands that the expenditure of income be as individualizing as possible. The last-century artisan unfolded his character in the quality and the quantity of his work. The nineteenth and the twentieth century artisan must unfold his character in the way in which he spends his money. The person becomes individual and economically strong as he comes to appropriate culture for his private use. As culture creates a strong demand for the things which call out the individual from the mass, it tends to defeat the Malthusian law of population and to set at naught the Ricardian law of wages. If picture galleries are to raise the standard of living, they must influence the individual expenditure of the artisan. It need not be in creating a demand for pictures in the home, but it must create a sense of the æsthetic which will be reflected in the architecture and furnishings of the home, or in the dress of the family, or in the flowers in the

garden. The sense of the beautiful may find expression in large or small groups of expenditure, but the success of the culture institutions must be tested by such expenditures. The present thesis is that the love of the beautiful must not find its complete satisfaction in the facilities provided for the use of the public. Otherwise the object is not gained: the individual will less frequently, and with greater difficulty, emerge from the mass. It will be more difficult than ever for the economic individual to emerge.

Public or municipal ownership of cultural property is sometimes called a form of co-operation. The people agree to purchase and use pictures and books in common, or provide music and the drama in common, or provide educational facilities on the co-operative plan, --- on the principle that they secure a better service in that way. It is an idea which is taking deep root, and promises a thrifty growth in the future. It must be noted, however, that, in so far as dependence for culture influences turns from the home to the city, the economic individual has been drained of his strength. The capacity of the city through such agencies to lift the people to a higher plane consists, not in satisfying desires, but in quickening desires which the individual himself must find means to satisfy. The sum total of human happiness may be increased for the time by municipal provision for the satisfaction of wants; but, if that is the end, it will result in weakening the power of the individual by neglecting the standard of home comforts. It can hardly be said that the priceless art treasures of Italy, which belong to the people, bring them to a higher plane of living. The highest art and the most wretched squalor are the closest neighbors.

In proportion as the city satisfies wants, may it be said to open the way for the baleful operation of the Malthusian law of population and for the operation of the Ricardian law of wages. Thus the city, in attempting to build up the culture of the community, may undermine the power of the individual to realize himself, and thus defeat the chief end of culture. There is no quarrel here with municipal patronage of culture. It is simply sought to indicate a danger from such a policy if certain economic forces, long ago discovered and still operative, are ignored. Against this danger it is the province of education to provide, and this brings us to a more detailed discussion of the economic functions of education.

A capacity to appropriate the better things of life is the test of economic strength. This capacity is likewise a test of the adaptiveness of a people to a meliorative scheme. Schemes for elevating the masses may fail utterly of their purpose unless there has been a previous development of character which is capable of wisely using the opportunities made available. An eight-hour law, for instance, might prove the ruin of a people unless there had been an adequate growth in moral restraint.

Therefore, we turn to education as essential to any solution of industrial problems. Illiteracy is an insuperable impediment to industrial reform. It is the general discipline and self-restraint imposed by the school-room which makes the citizen amenable to the correction of public opinion and which makes the workingman frugal and industrious.

Passing from this general truth to a closer analysis of the things which education has to overcome, we find chief among these the desire to satisfy immediate wants. The impulse to satisfy the wants which have to do with the physical senses is universal. The persons who yield to these desires—the gluttons, the drunkards, the prostitutes, the classes whom we call degenerates—have simply gravitated in the direction of their primary sensual appetites. An uncurbed appetite for sugar and sweetmeats belongs to the same class of phenomena as an uncontrollable appetite for drink. Merely physical impulses are in control in both cases, the demands of the body keeping

the higher parts in abeyance. A rational discipline is essential to elevate the race out of this sensual state. An undisciplined and illiterate people is apt to be a licentious people. Education stands between the undeveloped child and such a fate. Education here may not mean a school training in the case of every individual, but some sort of kindred discipline is essential to a control of natural appetites; and in the extent of this control we have all the difference between a cultured and a savage people.

The general stages of educational discipline may be described as follows:—

First. Compulsory discipline without reason or explanation. The child first starts to school because it is sent, and it goes willingly because other children of the same age are going. The power of imitation is usually a sufficient impelling force. Children concentrate their minds and accomplish their tasks in spite of the universal inclination to run wild in the woods, because other children are doing the same thing; and this favorable environment is created by the suggestions of the teacher and parents. Extra diligence is induced by the hope of praise for work well done. There is no reason involved in any of the processes.

Second. In the second stage there is also no reason involved, but a new impulsive element has been evolved. At first there was no pleasure in the act of studying. It was a painful process, endured by force of example and for the reward of praise. After the discipline has continued sufficiently long, it ceases to be painful. In time the act of studying, of solving problems, of mastering the difficulties of penmanship, of learning to use the voice properly in reading and speaking or of learning new facts in science and history, become pleasures in themselves. The mind has developed a faculty for overcoming difficulties, and mental triumphs bring a joyous sense of exhilaration and a thrill of happiness. To the primary

impelling forces an attractive force of great intensity has been added.

Third. The third stage brings the pupil to a sense of general order and harmony which might be described as respectability. Education has made a good citizen because it has evolved a sensitiveness to order, because senses have been quickened which would be shocked by excessive or indecent indulgences of physical wants. At this point we note the union between the economic and the moral, or we find the economic serving as the handmaiden of the moral. The demand for order and harmony includes obedience to the accepted laws and canons of righteous living as prescribed by the best tone of the community.

In order to realize order, to experience harmonious living, certain economic auxiliaries must be realized. sense of order which makes for respectability will despise the hovel, or tolerate it only until a more pleasing habitation can be realized. This sense of order which makes for respectability will abhor the ragged coat and the shoes run down at the heel. A person thoroughly imbued with the sense of order and harmony will chafe and be miserable in an unsightly garb. The sense of order which makes for respectability will never be satisfied with the pictures and ornaments which have been brought into the home until the highest reaches of art have been touched. sense of order, of harmony, as it grows in the individual, makes ever-heavier drafts upon the economic resources. The realization of order and harmony calls for greater industry and larger sacrifices of immediate sensual desires.

This sense of order has its positive and its negative side. On its negative side we observe the things which shock the sense of proper conduct, such as vulgar displays of temper or conduct which outrages the religious sense. On the positive side we note the ambition to acquire those things which cater both to physical comfort and to the sense of the beautiful. It is this side which puts the economic ac-

tivities into motion, which inspires to industry, thrift and economy.

The desire for greater comfort and objects of art is often abortive for want of a sufficient concreteness in educational methods. The desire for these things is felt, but the intellect has not grasped any clear and definitely formulated scheme for attaining them. Their attainment demands providence. Providence means a power of sacrificing a multitude of immediate wants, which are ever clamoring for all of one's income. Economic strength consists in the power to subdue these small wants, in order to realize more remote but greater satisfactions.

An ideal educational system will not only kindle a passion for order: it will formulate definite rules, and provide institutions expressly designed to facilitate the realization of order. Perhaps the most unfortunate and unhappy creature in the world is the man who has longings for order, but lacks the capacity to gratify his longings. The person who has implanted within him the love of the beautiful, but who has no power of appropriating beautiful things for himself, is a half-finished product of education. Such a man is pitifully weak and incomplete. The existence of many people of this type is proof of the incompleteness of our educational systems. These systems might be called brutally inadequate to human needs, in so far as they kindle proper desires without building the character for their satisfaction.

The two things essential to economic self-realization are making and saving. Lessons in making are more likely to be taught outside of school, but not so lessons in saving. A completed educational system will both inspire the pupil with a love of good things, and teach him how to obtain them through saving.

The savings-bank, when properly organized, is an educational rather than an economic institution. Although

it furnishes a safe place for the deposit of wages and small earnings and pays an interest to depositors, its chief design is to teach the art of saving. Since it represents a phase of education which is not amenable to compulsory methods, it must seek to reach a maximum of attractiveness. With this object in view the factors determining the success of a savings system are security of deposits, earning capacity of deposits, and locality of depositories.

The first requisite of success is perfect security of deposit. Insistence upon absolute security of deposits might be criticised as a hot-house method.—as forcing a growth which cannot endure the variations in the outside atmosphere. It might be said that the insecurity of temporal things is a fact which should be impressed upon the minds of every one; and it might be urged that implicit reliance upon an institution or upon a person tends to foster a spirit of dependence, and induces a helplessness to cope with the world. Against this it might be urged that it is the province of organized society to eliminate the elements of insecurity in so far as practicable. In lines of education the hot-house method can never be wholly discarded. Reliance upon the master and upon the educational institution are essential to the success of any educational scheme. In teaching lessons in saving, therefore, as great care should be exercised in providing a confidence-deserving savings institution as would be exercised in selecting a master with an education and equipment deserving of the confidence of the pupil. In view of the many grown people who are still children in the matter of spending their money, it is clear that they should receive every encouragement which a sense of perfect security will give.

As to the earning power of the deposits, the rule should be laid down that the deposits should be made to earn as large an interest sum as would be consistent with reasonable security. This point is not always insisted upon by

advocates of the savings-banks as a part of an educational It seems a great mistake. In proportion as the saving power is weak, should the pecuniary inducement to save be high. The very weak saver is not induced to save, in order to finally spend for a different class of goods. He does not classify his expenditures, but he has an ill-defined sense of few or many gross satisfactions. The greater amount of satisfactions, according to his present estimate of satisfactions, is the telling argument. He will reason that it is as well to spend your money as it comes in, and be sure of your enjoyments, as to practise self-denial for a period, and to have no greater satisfaction at the end than the sum of the enjoyments which he might have been having all the time. He might reason that it would even be better to spend as you go, because such a policy would save the pain involved in self-denial. There must be an appreciable addition to the sum of satisfactions in the hope of the weak saver, to induce him to sacrifice present wants. The greater this addition, the greater the success of the scheme. If the bank deposits could be made to earn for the depositor an interest rate of 10 per cent., it would be more than four times as effective an educator as a 3 per cent. rate. An extraordinary stimulant is required where the saving power is very weak.

Ideas current in America about legitimate investments of postal-savings deposits are liable partially to defeat the main object of the institution. Postal savings is itself a phase of state activity which impinges upon inherited prejudices as to the legitimate functions of the state. It could hardly find acceptance in America, except as an educational scheme. Great fear is entertained lest the government, in order to carry out the scheme, will have to do more or less of a banking, or money-lending, business. The ghost of laissez faire is greatly frightened at such a prospect. Hence there has sprung up in anticipation of the postal savings-bank an incipient doctrine as to legit-

imate and illegitimate investment of funds held in trust by the government. This incipient doctrine proscribes investments in personal or real estate securities, and prescribes government and state securities. The idea that a state savings system should deal only in state or other public securities will, if it prevails, keep the earnings of deposits below 3 per cent., while in America the rate should be 4 or 5 per cent. One could wish in the interest of social and industrial reform that so much of the old idea of the Physiocrats as to the legitimate sphere of state activity had not survived. A more hopeful doctrine might be borrowed from the practice of courts in interpreting statutes,—that the power of the courts to use whatever means may be necessary to make the law fully effective is assumed. The effectiveness of a reform measure should not be hampered by any doctrines as to the legitimate sphere of state activity. The adoption of a reform measure by the state should be the single issue; and, that settled, every provision should be made looking to its complete success. The first battle won, there should be no further hostages to laissez faire. This is the logical position, and it would be the best fighting position if the friends of the movement could only be made to see it.

Such a principle would dictate a policy as to investments having in view a large return to depositors. Following the approved policy of existing savings-banks in America, such loans would largely be on real estate security, which might average a gross interest of about 6 per cent. In the larger cities a pawn-shop feature might be added, which should yield about 10 per cent.*

*Since 1840 the state pawn-shop system of Madrid, known by the name of "Mont-de-Piete," which dates from 1702, has been joined to the savings-bank. Since then the two have been under state management as a single institution, entirely successful and self-supporting. Loans are made by the pawn department on deposit of jewels, diamonds, precious stones, linen articles of clothing, and government securities, at the remarkably low rate of 6 per cent. per annum. In other states and private pawn-shops the minimum interest rate is about 12 per cent. Notwithstanding this low rate the savings department

The location of the savings-bank is a most important consideration. Here the success must largely depend upon the breadth of view. A centralized system has a great advantage over a local system, a state over a municipal system. The test here is not how large a per cent. of the population become patrons of the bank, but how extensively the most improvident classes have been reached. Improvidence becomes, to an extent, localized in a section of the country or in a community within the city. A backward section of a country is almost inevitably an improvident section. The backwardness is due in large measure to a low saving power. Capitalistic undertakings are scarce because the ratio between earning power and living expenditures tends to an equality. The redemption of the section demands that the lack of individual providence be made good by collective savings, that collective sacrifices afford the opportunity for capitalistic undertakings, and that the tutelage in savings train the individuals to become capitalists, to give direction to the facilities made available. The state can best discover these weak localities and supply the machinery for their redemption. They will never discover themselves. Thus a local system, like the German, will leave the backward sections of the country unprovided for. Or a voluntary system, like the present one in America, may only find a high development in three or four states, and in those states only in a few large cities. The post-office seems an ideal institution in this regard for accomplishing the purpose of the savings-bank. It reaches every rural community; and the more rural or backward the community, perhaps,

is able to insure the depositors an interest rate of 4 per cent. per annum. A rate of 12 per cent. in America would prove a great boon to the deserving patrons of the pawn-shops, at the same time netting the bank about 10 per cent., and appreciably increasing the general interest-bearing power of the deposits. For fuller account of the Madrid system, see "Report on the System of Pawnbroking in Spain," by H. Drummond Wolff, in Reports from her Majesty's Representatives Abroad on the Systems of Paunbroking in Various Countries (August, 1894).

the more intimately does it touch the life of its every individual. On the other hand, in localities where a discipline in saving is not so much needed, where there is no demand for postal savings (as where co-operative building associations are largely in use), the postal savings-bank may aid existing institutions by affording them a safe depository for their current funds without interfering with their general usefulness.

The same localizing tendency is found within the locality. Any city could be plotted with reference to the general degrees of the improvidence of the citizens. A scientific savings system within a city will extend its facilities not so much with reference to the amount of business as with reference to the amount of need of encouragement to save. It is more urgent that the savings collector should go from house to house explaining the advantages of saving accounts, and that well-appointed depositories should be located in communities where the people are strangers to the saving habit, than in communities where the people are well started in saving. In the latter class of communities the people will seek the savings-bank, in the former the savings-bank must seek the people. Here the advantage of a centralized philanthropic system is evident. As between the state government and the city government, it is reasonable to assume, and experience amply proves, that the city is more competent to minister to the needs of the different localities. The municipal savings-banks in both Germany and France (the latter in competition with the postal savings-bank) have beaten the best records of state savings systems in cultivating savings. Municipal systems for large cities seem to offer an excellent supplement to a state savings system organized in the spirit of an educational scheme. Objections to municipal savings-banks in America, however, may be valid until a more intelligent and vital municipal spirit has been aroused.

The above considerations are directed mainly to the education of adults in saving. The logical starting-place of savings-banks is the elementary schools. Savings-banks should above all be placed within the knowledge of children, and their methods and advantages should be explained to every child. This would be the surest way of bringing within reach the realization of the sense of order which culture creates. Savings-banks offer most attractive facilities for impressing youth with the value of providence. While the pupil is learning the advantages of sacrificing the small pleasures of the present for the greater pleasures of the future through his weekly investments in savings-bank credits, he is acquiring a new zest for the mastery of arithmetical sums and the rules of interest. In many ways it can be made to fit in and supplement the general curricula.

Providence is the faculty which there is most need to cultivate in the child. Education must instil into the thought of the child the character of property, the desirability of its lawful possession, and the means of acquiring it. Criminality largely flows from hazy conceptions of the character of property and proper methods of acquiring it. Education should enforce these things upon the minds of the young by the most simple and concrete methods. Children are like savages in their conception of property. Any one who has watched the Indians at an agency, spending the money which they draw from the government, knows how aptly they represent the childhood of the race in the use of money. While they are wretch-

^{*} It is gratifying to see how clearly this weakness is recognized, and how intelligent a treatment is applied by the superintendent of the leading Indian school in America, as shown in the following extracts from a letter to the writer:—

[&]quot;We still use the savings-bank as an adjunct to our system of education, and it has grown and enlarged as the school has grown. We place equal emphasis on the earning. We require our students to earn and save.

[&]quot;During the summer we place out in the country a very large proportion of our students. Just now we have out 586. They are all earning good wages in

edly clothed and housed, they will invest their money in bright tin boxes and Saratoga trunks.

The idea of school savings dates from 1834, when it was adopted in a communal school in Le Mans, France. The system was next established at Würtemberg in 1846, and in Buda Pesth in 1866. The most active propaganda was commenced in Belgium in 1866 by Professor Laurent, of the University of Ghent, who travelled about the kingdom, going from school to school explaining the advantages of such an institution to educators and the people. As a result of his labors, about \$800,000 was deposited by the children of the country by the close of 1891. The system has now been introduced into most of the countries in Europe.

France now leads the world in this department of education, thanks to the scientific methods and complete devotion of M. A. C. Marlarce. He was deputed by his government to make a study of educational methods, with especial reference to economic instruction at the Vienna Exposition in 1873. He also visited the schools' savingsbanks in Belgium, Germany, and England, and consulted with Professor Laurent and other authorities. The plan which he developed is now in use, under the protection of the government, throughout France. In 1892 there were 23,375 schools where children's savings were received, and through them 478,173 children kept savings accounts which reached the aggregate amount of 12,683,312 francs. A frequent mode of bestowing aid is to give to the chil-

proportion to their ability. The earnings of the school year will probably exceed \$25,000. We impress upon those who have charge of our students to teach them to save, to buy whatever may be necessary economically, and to buy with wisdom. We have a system of reports which keeps us informed in regard to each case, so that we can ourselves emphasize instructions. Students going out each make a contract, and part of that contract is to save.

"The banking system is in the school, but we use the local bank and \$10,000 in 6 per cent. bonds. The bank pays 3 per cent. Our depositors number above 700, practically seven-eighths of our pupils. The others would be depositors, were they not too young to earn money or too recently arrived." From a letter from Captain R. H. Pratt, of the Tenth United States Cavalry, superintendent of the Carliale Indian Industrial School at Carliale, Pennsylvania.

dren of the poor a savings-bank account in lieu of money. Madame Carnot, wife of the French president, in 1888 distributed among four hundred of the poorest children in Paris savings-bank books, each containing a credit of ten francs.

The systems in use in Germany, Hungary, Russia, Switzerland, Denmark, Holland, and England, are commonly managed by private associations. In Italy the number of children depositors through the schools increased from 11,933 in 1876 to 65,062 in 1885, and to 102,832 in 1888; but there was a drop to 90,974 in 1890. The amounts of deposits for the same periods were 32,049 lire, 376,345 lire, and 496,564 and 382,674 lire. In Hungary the increase has been constant, starting with 2,621 pupils in 1876, and reaching 37,737 in 1890; and the total of deposits, which had started with only 13,337 gulden, had reached 113,264 gulden in 1886. In Germany in the year 1883 savings-banks in connection with 834 schools had 61,940 children patrons and deposits amounting to some 640,000 marks. Besides these there were about 50 other children's savings-banks. In 1892 there were 158 cities and 2,272 villages in the empire with facilities designed especially for youthful saving. They included 1,091 school savings-banks, with about 4,000 places of deposit, 1,821 Youths' Deposit Banks (Jugend Darlehnkassen), 19 confirmation banks, 336 pfennig savings-banks, and 100 Sunday-school savings-banks. There were in all 243,938 youthful patrons of these various institutions, and savings amounting to some 1.76 million marks.

A common scheme for encouraging small savings, adopted by the postal and other savings-banks, is the issuing of cards containing printed spaces for stamps. The depositor may invest his savings in postage-stamps of the denominations of a penny, ten centimes, and the like, and paste them in these spaces. When his card is filled, it contains an equivalent in stamps of the minimum de-

posit which the bank will receive,—as a shilling, a franc,—and then it will be received as money. In England such blank cards can be had at all post-offices on application. In England, also, agents of the postal banks go to the school-houses to collect the children's deposits, if such an arrangement be desired. In Italy the teacher may receive deposits from his pupils, and may obtain from the postal savings-bank a book in which the entire sum of deposits is credited from time to time, the teacher himself keeping the individual accounts of the pupils separate.

The matter seems to have first come into public notice in the United States in a paper read by Mr. John P. Townsend, of New York, before the American Social Science Association in 1876, and about the same time through articles for the press by Mr. T. S. Merrill, of Beloit. Mr. Merrill was instrumental in establishing a bank, founded on the result of his investigation in Europe, in the public schools of Beloit, which, however, only lasted five years. The next experiment in this direction was that of Captain R. H. Pratt, of the Tenth Cavalry, superintendent of the Carlisle Indian Industrial School.

An interesting experiment was that of Superintendent C. M. Carpenter in the public schools of Bloomington, Indiana. This was made to yield the depositors 10 per cent. interest by operating in connection with a local building association. The money from the different grades was placed in envelopes, and these were taken to the Workmen's Building & Loan Fund and Savings Association. The school was carrying 100 shares of running stock, for which it paid \$25 dollars weekly. The balance of the deposit was applied to the purchase of paid-up stock bearing 6 per cent. interest. This high rate was due to a number of causes. Being conducted on the co-operative principle, there were no salaried officers and scarcely any expense of any kind. Interest was only paid on even dollars; and deposits were not paid interest from

the date of deposit, but interest began to run from the last Monday in the month. Out of 1,100 pupils in 1898, 650 were depositors. The average weekly deposit for the school was \$47.17, and the average weekly withdrawal was \$13.81. The subsequent history of the experiment shows how essential it is to have teachers aroused to the importance of such an institution. On the removal of Superintendent Carpenter, who was the organizer and manager, all the deposits were soon withdrawn because his successor took no interest in it.

The present development of school savings in this country is due largely to the enthusiasm and untiring efforts of Mr. J. T. Thiry, of Long Island City, and of Sarah Louisa Oberholzer, of Norristown, Pennsylvania. Mr. Thiry, who is a native of France, came to this country a few years ago for his health, and has since proven himself an invaluable citizen. While serving as school commissioner in Long Island City in 1885, he introduced the savings system into the city schools; and he is still a tireless worker for school savings. The spirit and method of this work in America are best described in Mr. Thiry's own words:—

Here, then, is the field, the inspiration, and the aim of the school banking system. It takes the principles of frugality and thrift down into the training-ground of the young,—the public schools,—and confirms them in those habits upon which success in their future struggles for competence will depend. By so doing it fosters the morals, for a better manhood is inseparable from a frugal life. Thus school banking is in thorough harmony with the school; for, as the school aims at making a good citizen, so likewise does school banking. It is an object-lesson in political economy, and is of telling import when the pupil at last crosses the line which divides the worlds of business and study. The practical conduct of school banking is very simple. Every Monday morning ten minutes are devoted by teachers to the collection of the savings of the scholars. These savings are deposited in the savings-bank to the credit of the scholars. When a child has a deposit of one dollar, the bank provides a bank-book. Money is only to be withdrawn by check, signed by the depositor and by the parent or teacher.

This method, varying somewhat from that of Belgium and other European lands, I had the privilege of introducing into the schools of Long Island City, New York, in 1885. What have been the results of the movement, then only to be regarded as a hazardous innovation? Twelve years have passed. School banking long ago ceased to be an experiment. It is now in successful operation in sixty-three cities and villages in the nation. The total amount deposited to the credit of the children is \$451,211.87. Of this amount \$158,197.14 remained due to the depositors March 16, 1897. These statistics represent what may be described as the regular system of school banking. This system has, however, given rise to several others in the schools, such as the stamp and collection systems, and to several philanthropic organizations of a more general character, such as the Penny Provident Fund of New York, the Provident Savings Bank of Baltimore, and the Stamp Savings System of Grand Rapids, Michigan.*

Mr. Thiry publishes an annual report of the standing of the different school savings-banks in the United States. The report for the year ending March 16, 1898, shows a total number of school-houses having savings-banks of 349, and these containing 1,809 banks. In these schools there were registered 97,999 pupils, of whom 41,868, or nearly one-half, were depositors. The total deposits amounted to \$530,819, and the total withdrawals to \$350,668, leaving due the depositors \$179,651. As compared with the standing for the year ending March 16, 1897, the report shows extraordinary progress. There were then only 280 schools with banks, and only 1,572 banks. The amount due depositors has risen from \$158,197.

An index to the capacity of Mr. Thiry and Mrs. Oberholzer for propaganda is found in the fact that, out of the total number of school-houses containing savings-banks, 53 are in New York and 153 in Pennsylvania, their respective home states. These figures also furnish an index to the inadequacy of the voluntary movement. It is no

^{*}Extract from an address before Council of State Superintendents at Onondaga, New York, October 22, 1897, and published in the Report of the Transactions of the Association.

disparagement of the principal movers in the cause to conclude that, after thirteen years of active and earnest effort, the results attained are proof of the inadequacy of unaided voluntary action. In these years only seventy-six towns and cities in the United States have adopted school savings, and these extend over only eight states. Scarcely an impression has been made upon the school system of the country. The reasons should be clear enough.

The voluntary system places too great a reliance upon the skill and interest of superintendents and teachers. This is the rock on which a number of school banks have gone to pieces, notably the one at Bloomington, Indiana, before mentioned. Every change of superintendents must place in peril the continuance of the children's saving system, because its vitality depends upon the interest and appreciation of the incoming superintendent.

In the second place the system imposes too heavy a burden upon the superintendent. If it is made a regular requirement, the superintendent, or teacher, may be expected to give instruction in the general principles of saving; but, in order for this much to be accomplished, it should be a universal and well-recognized feature of school training. In addition to this the system requires the teacher to be to an extent a banker, and it requires him to enter into rather a complicated arrangement with a local bank; and he may have no qualification for either of these offices.

Another obstacle to their success is a lack of confidence in local banking institutions. Mrs. Oberholzer writes, "The lack of public confidence in banking institutions has been our greatest drawback in the introduction of school savings-banks." In the same letter she says, "I am in favor of postal savings, and all secure and legitimate methods for saving money for individual and public benefit." Where there are a number of banks in a locality, it

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may often be a delicate matter to select one of them to manage the school savings. Local jealousies growing out of such selection might seriously embarrass the superintendent and cripple the success of the institution.

Hence the two chief desiderata for a successful school savings system are (1) the incorporation of instruction in savings in the curricula of the school and (2) a safe and competent outside agency for the collection and custody of the funds. With instruction and periodical visitation reduced to method, the foundation for the greatest progress in savings will have been laid.

A postal savings system can afford a satisfactory custody and a competent corps of collectors to make periodical visits to the schools. The postal system has the additional advantage of reaching both the parents and the children. It can send its missionaries to the home and to the factory to collect savings and to explain the principle of the savings-bank. For any private institutions such visits would be very delicate undertakings, and doubtful as to their results.

The full value of school savings could not be reached unless the parents were also indoctrinated with the idea, and the parents need considerable instruction in order to secure their co-operation. Poor parents, whose children earn money out of school hours, are often incompetent to advise their children as to how to spend their earnings, which are very likely to be spent to the injury of the children. Newsboys are alarmingly addicted to the use of tobacco. If their parents could be induced to become patrons of the savings-banks in ever so small a way, the school savings-bank would have secured a powerful ally.

The need of such co-operation is also great in the case of the well-to-do parents. To such families the savings-bank visitor might suggest salutary modifications in the domestic economy. The pampering of children in such families is likely to prove their ruin. An unwise and

indiscriminate catering to the wants of children is the most natural fault of a parent who is able to respond to their appeals. In this respect the children of the poor have the advantage. They at least learn the lesson of making, if they know nothing of saving. A wholesome doctrine for the adoption of well-to-do homes would be to teach the children to look to their parents, as a matter of course, for provision for their physical necessities and for their education, but for nothing more than this. Facilities for earning should be afforded by the parent, if necessary, in the care of the house and grounds or the garden or the furnace or amanuensis work or doing errands. In such cases payment should not be made in money, but in certificates of deposit in the savings-bank. Every opportunity and facility should be used for increasing the acquaintance and familiarity with the savingsbank.

These considerations point to the savings-bank as the best educator in practical economy. They recognize the present economic order as the order of the future, in so far as we have any concern. With this fact kept in view, it will be seen that the chief remedy proposed, state education in saving, cannot be regarded as in any sense socialistic. Its spirit is as diametrically opposed to collectivism as possible; for it seeks, above all, to strengthen the individual for the battles of competition. It seeks to impress the lessons of self-control and self-discipline for the building up of economic strength.

It has been the object of the writer in the preceding pages to direct attention to what seems a serious danger in the present trend of meliorative thought; and, in so far as this trend of thought seeks the elevation of the masses through the influences of culture, he has sought to expose its weakness. He has also sought to trace the economic bearings of education and to indicate how far existing systems come short of the ideal. He considers the build

ing of economic strength to be the chief function of education. Here he would not be considered as favoring a merely materialistic scheme of education, neglecting the imaginative, æsthetic, and ethical sides of the child's nature, but as emphasizing the interdependence of growth in culture and of control over immediate wants. A recognition of the incompetency of present educational schemes to build up an economic basis for growth in individual culture will at the same time lead to a recognition of the grain of truth in the assertion, so often made, that our educational systems are impractical. Following this line of reasoning, the writer is forced to the conclusion that instruction in saving, both by precept and example, both to children and adults, promises more than anything else to give the practical finish to our educational schemes. He believes that an institution which will commend itself to the approval and the confidence of the masses in so far as to secure their patronage will conduce more than almost anything else to individual self-realization.

The scheme of required instruction in saving, supplemented by a central public savings-bank, indicates the writer's view as to the extent to which economics should be taught in the elementary schools. It might well be taught under the name of practical economics; for it promises to guide the individual to a higher plane of living, to supply him with both the theory and the facilities for attaining unto the better things of life.

Finally, these views are presented in the belief that, if the educational aspects of savings are clearly recognized by the public, it will wisely influence the provisions for a state savings-bank in America, when public sentiment is ripe for such an institution.

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A CONNECTICUT LAND BANK OF THE EIGHTEENTH CENTURY.

In a previous paper the writer described the Massachusetts Land Bank of 1740, and pointed out that the theory upon which it was founded had been the subject of discussion long before the actual trial made in 1740.* In 1714 an attempt had been made to organize a similar company; and this in turn had been based upon a project originally submitted to the Council of the Massachusetts Bay in 1686, and for a time favorably considered by that body. In the account of a Connecticut company organized in 1732, which forms the subject of the present paper,† certain resemblances to the Massachusetts Land Bank will be easily detected, whose origin may perhaps be attributed to the discussion in this province in 1714 and 1686. In each case the intention apparently was to form a company which should furnish bills somewhat similar in character to the bills of public credit then in circulation. The currency of these bills was to be attained through lending them to borrowers who would agree to receive them in trade and commerce, and who were to furnish adequate security for their loans, the general idea being that real estate was best for that purpose. The borrowers were to constitute the company, which was to have no capital stock paid in; and their voice in the management of its affairs was to be proportionate to their borrowings.

The Connecticut company did not originally pose as an organization of this description. It was chartered in 1732 by the Connecticut Assembly, under the title of the New London Society United for Trade and Commerce. It is evident from the language of the charter that the intention of the Assembly was to permit the formation of a joint stock company, in

^{*}Currency Discussion in Massachusetts in the Eighteenth Contury, in this Journal, vol. xi., October, 1896, and January, 1897.

[†] The story of this Connecticut Land Bank formed the subject of a communication to the Colonial Society of Massachusetts at the meeting of January, 1898.

which the members should participate in proportion to the amount of their investments. The alleged purposes of the society are sufficiently indicated in its title. If upon an analysis of the affairs of this company we shall find in its actual organization enough points of identity with the schemes of the banks proposed in Massachusetts to indicate a community of origin, we shall add to the proof already at hand another instance of the far-reaching influence of the London pamphlet which furnished the methods for the Massachusetts projects of 1686 and 1714 and for the experiment of 1740. In order that we may reach a conclusion upon this point, a review of the facts connected with the career of this society, so far as they can be gathered from the Colonial Records of Connecticut and the publications of the Connecticut Historical Society, will now be presented.

In May, 1732, Thomas Seymour, John Curtiss, John Bissell and fifty-eight others, said to have been representative men of good standing from various parts of the colony, presented a petition to the Assembly. The petitioners represented that for the promoting and carrying on trade and commerce to Great Britain and his Majesty's islands and plantations in America and to other of his Majesty's dominions, and for the encouraging the fishery, . . . as well for the common good as their own private interests, they had agreed to unite themselves together to be a society and have one common stock. For want of authority to act as societies do by vote, they labored under great disadvantage. They prayed to be put in a politic capacity as a society.†

The Assembly favored the petitioners, and at the same session resolved and granted that the memorialists should be declared and constituted to be for the future one society in fact and in name, by the name of the New London Society United for Trade and Commerce. They and their successors were empowered to admit others; to sue and be sued by their name aforesaid as other societies were by the law of Connecti-

^{*}A Model for erecting a Bank of Credit, etc. This pamphlet, reprinted in Boston in 1714, was unquestionably in possession of the person who prepared the scheme for the proposed bank in 1686. See this Journal, vol. xi. pp. 71-77.

[?] Connecticut Colonial Recorde, vol. vii. p. 890.

cut; to elect officers annually, and to prescribe rules for their meetings, which orders and rules were to be binding upon the particular members of said society; and no man should have liberty to take out his stock without leave of the society, though he might sell the same. Then followed provisions for organizing the society.

The generally accepted account of the career of this society is that the society was formed in 1730,* "being legalized and patronized by the colonial government," and went into immediate operation. "Loans upon mortgage were obtained from the public treasury, and the capital employed in trade. It had about eighty members scattered over the whole colony. . . . To facilitate its operations, the New London Society emitted bills of credit, or society notes, to run for twelve years from the day of date, October 25, 1782, to October 25, 1744. These bills were hailed by the business part of the community with delight. They went into immediate circulation. But the government was alarmed. Wise men declared the whole fabric to be made of paper; and, having no solid support, it must soon be destroyed. The governor and council issued an order denouncing the new money, and an extra session of the Assembly was convened to consider the bold position of the society. This was in February, 1788. The legislature dissolved the association; and the mortgages were assumed by the governor and company, and the bills allowed to run until they could be called in and the affairs of the society settled. . . . According to their own statement, a great part of their stock had been consumed by losses at sea and disappointments at home. ... At a meeting held June 5, 1735, they unanimously dissolved themselves."

This account is derived in part from sources not indicated by the author. In part it rests obviously upon the legislation of the colony. It happens that the published records of the colony contain so complete a rehearsal of the various transactions of the society that, when taken in connection with the material to be derived from the publications of the Connecticut Historical Society, they make possible a more detailed analysis of its career. It is evident, from information to be obtained

* History of New London, by Frances Manwaring Caulkins, pp. 242, 243.

from the sources mentioned above, that the society was organized under the charter granted at the May session in 1732, and that, in disregard to the purposes set forth therein, it immediately proceeded to enter upon the work actually proposed—namely, to furnish a medium of trade to the colony of Connecticut—through the notes or bills of the society. The so-called stockholders turned out to be, not contributors of funds, but borrowers of notes. In short, the company was the prototype of the Massachusetts Land Bank of 1740.

The first step taken of which we obtain any trace was a vote passed in August, 1732, for printing £30,000 in bills of credit of the society. For the purpose of carrying this vote into effect, the committee having the matter in charge wrote to one Timothy Green, the public printer of the colony of Connecticut, who was then in Boston, informing him what had been done, and requesting him to procure paper for the bills and to employ an engraver to cut the plates for the society. This service he performed, forwarding the sheets in parcels.* A fac-simile of one of the bills is given in the Connecticut Colonial Records. The face of it, so far as it is of importance in this connection, reads as follows:†—

Three Shillings. This Indented bill of Three Shillings, Due to the possessor thereof from the NEW LONDON Society United for Trade and Commerce in Connecticut in NEW-ENGLAND, shall be in Value Equal to Silver at Sixteen Shillings pr. Ounce, or to Bills of Publick Credit of this or the Neighboring Governments, and shall be Accordingly accepted by the Treasurer of said Society, and in all Payments in said Society from time to time.

New-London, Aug. 1732

by Order of Said Society Comt.

The form, it will be observed, was constructed upon that of the old tenor bill. It anticipated the new tenor bill in stating a value in silver at which it should pass; but there is nothing about the twelve years which the bills, according to the account from which we have quoted, were to run. The date also differs from the date given in that account.

The process of emission began at once; and it was not long

- * Collections Connecticut Historical Society, vol. iv. p. 270.
- † Connecticut Colonial Records, vol. viii. p. 410.

before knowledge of what was being done under the guise of fostering trade and commerce came to the ears of Governor Talcott. On the 9th of February, 1782-33, he issued a precept to the sheriff of Hartford County, in which he recited that he had been informed that the New London Society for Trade and Commerce had struck and signed bills on the credit of the society to the sum of many thousand pounds, and had sold such bills to his Majesty's subjects as a medium of trade, current and equal in value to current money or bills of public credit of Connecticut or the neighboring governments, and had received for the said bills provisions and other commodities of the country in great quantities. This he alleged to be contrary to the peace of the crown and a great wrong to the purchasers of the bills, and a great abuse of the powers given to the society by the Assembly. The sheriff was therefore instructed to summon the said society to appear before the General Assembly at Hartford on the 15th of February, to show by what authority they had emitted and sold their bills, and to show cause why the Assembly should not order them to refund and pay back to the possessors of their bills the sums for which they had been sold, and further order that they should thereafter cease to strike or emit any bills on their credit, or to be a society.* At the same time a precept addressed to the sheriff of New London County was issued, in which he was directed to summon Daniel Coit, the secretary of the society, to appear before the Assembly at the same time and place, and to bring with him the records and doings of the society.†

At the special session of the legislature summoned for the consideration of these matters the society put in an appearance. They were apparently disposed at first to dispute the jurisdiction of the General Court; but this plea they waived, and based their defence upon the ground that the bills which they had issued were not of the nature and tenor of bills of the colony, but were of the character of bills of exchange, which they had a natural right and authority to emit.

The Assembly, having duly considered the plea of the society, submitted to vote a series of questions the determina-

^{*} Collections Connecticut Historical Society, vol. iv. pp. 269, 269.

[†] Ibid., vol. iv. pp. 269, 270.

tion of which would settle the action necessary to be taken under the circumstances. The answers to these questions may be formulated as follows:—

First. It was not lawful for any society of Connecticut nor for any person or persons, not having authority for that purpose from the government, to emit on private credit bills of credit of the tenor of bills of credit of the colony.

Second. The bills emitted by the New London society were of the tenor and nature of the bills of credit of the colony, and were not bills of exchange.

Third. The society ought in justice to redeem their bills in the hands of possessors.

Fourth. It was expedient for the Assembly to pass an act prohibiting the emitting or uttering bills of credit on any fund or credit within the colony of Connecticut which were intended for a general currency in lieu of money.*

Having determined these points, the Assembly proceeded to enforce the fourth proposition by passing an act of the character therein suggested. They stated in the preamble that they had observed that great disorder and confusion had arisen in the government by reason of the New London Society United for Trade and Commerce having presumed to strike and emit a certain number of bills of credit on their own society, and whereby many honest people were in danger of being defrauded. The peace of the government was thereby subverted, and the credit of the colony might sink. Those who should violate the act then passed were made subject to the penalties imposed upon forgers and counterfeiters of bills, and also to a forfeiture of double the sums mentioned in the bills which should be emitted.

The precept issued by the governor not only required the society to show cause why it should not cease to issue notes or bills, but also why it should not cease to be a society. Up to this point the Assembly had not taken into consideration the question whether or not the act under which the society was organized had been violated or not. The clerk of the society, however, had been summoned to produce the records; and the Assembly, having first caused the act under which the

* Connecticut Colonial Records, vol. vii. p. 421.

society was organized and the record of the doings of the society to be read, proceeded to the consideration of this question. The result of this examination is stated in the following words:—

It was observed that a stock was necessary to be made, by the proportion of which stock put in by the members thereof all their votes were to be computed, and that nothing but mortgages were put in by the members thereof to make this stock, on which the following question was put, whether by the said mortgages any stock were made, according to the true interest and meaning of the grant? Resolved in the negative.

"Nothing but mortgages were put in by the members thereof to make this stock." These words point plainly to an organization upon the same basis as that effected eight years afterwards by the Massachusetts Land Bank, which also emitted bills and lent them upon mortgage security to borrowers, the borrowers becoming thereby entitled to a voice in the proceedings of the company proportionate to the extent of the loan. On the above showing the Assembly determined that the New London Society had by its mismanagement forfeited the privileges granted to them, and at once proceeded to repeal the act containing the grant.*

The question next arose, How could these bills be withdrawn with the least disturbance to the community? The records do not state the amount supposed at that time to be in circulation; but Timothy Green, who procured the paper and the plates in Boston, said in his letter to Governor Talcott, "How much of the £30,000 is emitted is best known to the committee, clerk, and treasurer of said society: what is printed, I conclude, is about fifteen thousand pounds." † The Assembly determined at the special session that under the circum-

^{*} Connecticut Colonial Records, vol. vii. p. 422. The statement has been made that the bills of the society were halled by the business part of the community with delight. This is corroborated by a correspondent of Governor Talcott, who speaks of "the swift currency of the New London Society bills through so many hands." Collections Connecticut Historical Society, vol. iv. p. 279.

[†]As public printer, Green printed the public bills of credit. It is not much of an assumption to say that he must have printed the bills of the New London Society. His conclusion that there had been about fifteen thousand pounds printed may therefore be regarded as authoritative.

stances it was expedient to emit £30,000 in public bills of credit, a part of which was to be let out for the benefit of the government and the remainder to be tendered to such persons as the Assembly should appoint and as should give security, for the drawing in of the bills lately emitted by the New London Society.*

The determination of the exact amount to be set aside for the relief of possessors of these bills and of the manner in which the public bills should be applied for the purpose of drawing in the society bills was not then definitely concluded; though it may perhaps be considered that the limitation to such persons "as should give security" was meant to apply to those who, as borrowers of the bills of the society, had assumed responsibilities in connection therewith, and sufficiently indicates the intention of the Assembly at the time.

At the May session in 1783 Thomas Seymour and others presented a petition praying that the New London Society United for Trade and Commerce might be revived. They also asked for a loan of £30,000 from the colony. For the purpose of determining the attitude of the Assembly towards this petition, two questions were submitted. The first was whether it was within the authority of the government of Connecticut to make a company or society of merchants. In response to this it was resolved that, although a corporation t might make a fraternity for the management of trades, arts, or mysteries, endowed with authority to regulate the management thereof, yet (inasmuch as all companies of merchants were made at home by letters patent from the king, and the Assembly knew not of one single instance of any government in the plantations doing such a thing) that it was at least very doubtful whether they had authority to make such a society, and hazardous therefore for the government to presume upon The second question was whether it would be for the peace and health of the government to create such a society. The answer given by the Assembly was that a society of merchants whose undertakings were vastly beyond their own compass, and who must depend upon the government for their

^{*} Connecticut Colonial Records, vol. vii. p. 422.

[†] The Governor and Company of Connecticut.

supplies, and must rely on their influence upon the government to obtain them,—such a society was not for the peace and health of the government.*

Having thus finally disposed of the question whether the society should be revived and permitted to adjust its own affairs, the Assembly proceeded to deal with the subject of protecting the rights of possessors of the society bills. An act was passed appointing a court of chancery to hear and determine according to equity all controversies about said bills and the doings of said society and the several officers and members thereof. The preamble opens with a statement that sundry persons have of late mortgaged their lands to Mr. John Curtiss, treasurer of the late New London Society for Trade and Commerce, and to his successor, or to Daniel Coit, with a design to form themselves into a society for trade and commerce, under the name of the New London Society for Trade and Commerce. Having thus distinctly stated the character of the society, the preamble cautiously asserts that these mortgagors then assumed themselves to be a society for trade and commerce, and as such emitted and put in circulation many thousand pounds' worth of their bills. It then alleges that the deception of the mortgages was discovered, that the credit and currency of the bills was lost, and that the possessors of the bills were utterly defrauded. To prevent such mischiefs for the future, a special session of the legislature was held, at which it was declared that the society had no right to emit bills of credit; and it was, therefore, by act of Assembly dissolved. At the same session the Assembly also resolved that the society ought, in equity, to refund and pay back to the possessors of such bills so much in current money or bills of public credit as by said society bills is mentioned or expressed. At the time when the Assembly originally announced this conclusion they neglected to fix any penalty for failure to comply with it, and they did not provide any effectual means for enabling possessors of bills to recover from mortgagors. As a result, the mortgagors still neglected to pay to possessors the sums due them as aforesaid or any part of the same. In order to cure this evil, it was enacted that

• Connecticut Colonial Records, vol. vii. p. 449.

the mortgagors were liable to possessors of bills; but, inasmuch as the mortgagors had in their possession certain property of which no account had been rendered, they were to be permitted to hold one meeting, which, however, was not to last over three days, and were authorized to proceed to settle their accounts as best they could. They had authority given them to appoint a committee who should call upon the former officers for their accounts, who could sell the property of the mortgagors, pay off possessors of bills, and sue debtors before the special court. This court had authority given it to adjust and settle differences between the various parties interested in these proceedings. In order to give the mortgagors time to convert their property, the right of action on the part of the possessors of bills was postponed until six months after the rising of the Assembly. Special provision was made for discovering what mortgagors were in arrears; and it was made a condition precedent that the possessor of bills should, before bringing his action, lodge his bills in court.*

It has been already stated that at the special session it was determined that it was expedient to aid the mortgagors in their efforts to withdraw the society bills by lending public bills to those who could give security therefor. The time had now come to give effect to this expression of opinion. £15,000 were lodged in the hands of a committee, to be lent to mortgagors who should first give to the committee society bills to the amount of the proposed loans, and who could then have the public bills at the rate of 6 per cent, interest on furnishing landed security equal to twice the amount of the loan.† It is evident that the security thus demanded was regarded as applying to the principal alone. Separate bonds were required for the interest: and afterwards John Bissell, John Curtiss, Thomas Seymour, Daniel Coit, and six others gave bonds to the colony for large sums, in behalf of sundry others who were mortgagors, to answer for the payment of interest. At a later date questions arose about the substitution of the

^{*} Connecticut Colonial Records, vol. vii. pp. 450-452.

[†] *Ibid.*, vol. vii. p. 453. This proceeding may have been the basis for the statement that loans upon mortgage were obtained for the public treasury and the capital employed in trade.

bonds of individual mortgagors in place of these joint bonds.* There was trouble, also, about obtaining proper releases for satisfied mortgages given to the governor and company of the colony; and resort was had to special legislation on the subject.† It does not appear from the records that the committee having charge of the settlement of the affairs of the company were much bothered by recalcitrant mortgagors. Perhaps the records of the special court might disclose some cases of this sort; but it seems probable that the public bills furnished by the colony for purposes of exchange, taken in connection with the funds derived from the sale of the property of the society. provided ample means for the redemption of such bills as were presented to the committee. How it was possible for a society without capital to have acquired any property of consequence in so brief a career can only be conjectured; but, if the same course was pursued in Connecticut as was afterwards adopted in Massachusetts, this property must have represented ventures in trade accomplished through unsecured notes issued to the society.‡

There were controversies both with reference to the property which remained in the hands of the committee and to the adjustment of the losses in trade. In October, 1735, the committee petitioned the Assembly to cause certain proceedings to be postponed, as they were about to settle the affairs speedily and divide the estate.§ The question of the responsibility for losses proved more perplexing than had been anticipated, if the committee were really of opinion that they could speedily divide the estate; for they were obliged next year to ask for the appointment of a commission to determine these controversies. In response to this request a commission was appointed with full power.

It is evident that in 1742 there was a default in the payment to the colony of the interest on some of the mortgages, for Curtiss then petitioned for leave to set over to the colony

^{*} Connecticut Colonial Records, vol. vii. p. 560, vol. viii, p. 69.

[†] Ibid., vol. viii. p. 234.

[;] In addition to "the losses at sea and disappointments at home" which had absorbed a great part of their stock, one or two special ventures are mentioned in the *History of New London*.

[§] Connecticut Colonial Records, vol. viii. p. 24.

real estate, in order to satisfy certain executions for "use-money" due to the public treasury of the colony from the New London Society. This reference to the society as debtor of the colony can but be the careless use of language. Curtiss had been the treasurer of the society when it was in existence. After its dissolution he had been active in winding up its affairs; and he was one of those who, in behalf of other mortgagors, had given bonds to secure the payment of interest on the loans. These executions for "use-money" were probably on some of these bonds. Through the surrender of certain property in New London and by giving a bond for what remained due, Curtiss, with the approval of the Assembly, was released from the obligations that he had assumed.* Individuals, however, continued to occupy the time of the Assembly with their petitions as late as 1749.†

The exact amount of the circulation of the bills of the New London Society does not appear. It will be seen from what follows that it required less than £15,000 in the public bills of Connecticut, in their denominational values, to meet the calls upon the committee of the Assembly for purposes of exchange. In all probability the amount of the circulation was not far from £10,000. It would seem as if the committee having in charge the letting out of the £15,000 to the mortgagors must have reached the conclusion in October, 1733, that the period of their active work was over; for they then reported that they had received £9,507 11s. 8d. in bills of the society, which bills were then ordered to be burned.‡

This was followed by a petition in 1784 by some of the members of the late society, praying for a loan of so much of the £15,000 as was not required for the purpose of exchanging the society bills. The Assembly was disposed to grant this request, but, before doing so, required the representatives of the society to take steps to bring before possessors of bills throughout the entire colony knowledge that an opportunity was offered to exchange such bills for the public bills of credit of the colony. To carry this into operation, it was resolved that the memorialists should make a proclamation in

[•] Connecticut Colonial Records, vol. viii. pp. 491, 492.

the several towns in the colony to the effect that any person having bills of the society in his possession might, upon bringing them to the committee have bills of the colony in exchange therefor. This proclamation was to be made by affixing a notice containing this information upon the sign-posts in such towns. If the committee should certify that this had been done and that six weeks had been allowed for the bringing in of the bills, then so much of the £15,000 as remained in their possession could be loaned to the mortgagors.* The lending of the unexpended portion of this redemption fund to representatives of the company, after these final efforts had been put forth to protect possessors of bills, is a distinct recognition of the compliance of the mortgagors with the law; and it may fairly be assumed that the circulation of the society bills must practically have ceased when this was permitted. Although, as we have seen, there were matters connected with the company which occupied the time of the Assembly as late as 1749, this is to all intents and purposes the disappearance of the company as such from the scene.

We have been enabled through evidence in the records to ascertain the approximate date and the method of the organization of the society, and have had before us the form of the bill which was issued. It remains to explain the statements that the bills were dated in October, and were to run for twelve years from the day of date. The date (August) in the fac-simile given in the records corresponds with the time when Green said that he executed the order for the company, and had the bills engraved. It is reasonable to suppose that the entire issue bore the same engraved date, and was similar in character. This conjecture is re-enforced by the conclusion of the Assembly that the bills were of the tenor of the public bills of credit,—a statement which could hardly have been made if they were twelve-year notes. The mortgages given to the New London Society will naturally suggest themselves as perhaps having features to explain the impression that the society notes had twelve years to run. These mortgages, it will be remembered, were said by the Assembly to have been made to John Curtiss, treasurer, to his successor, or to Daniel Coit.

* Connecticut Colonial Records, vol. vii. p. 508.

Two of them, at least, are to be found in Hartford; and through the kind offices of Professor Franklin B. Dexter, of New Haven, I am able to give their material features. consideration in each mortgage was "current money." The date of each was October 24, 1732; and both ran to John Curtiss, treasurer of the New London Society United for Trade and Commerce. The proviso in each read that the deed was to become null and void upon payment being made "either in silver at sixteen shillings per ounce, or in true bills of public credit of this or the neighboring governments, or the like sum in bills of the New London Society United for Trade and Commerce upon the credit of said society, and that on or before the thirtieth day of October, which will be in the year of our Lord Christ one thousand seven hundred and forty-four." A person endeavoring to work out a description of the society bills from these mortgages might easily be led to describe the bills as having twelve years to run. Perhaps the New London Registry would furnish examples from which an even closer description might be drawn.

The true character of the society seems not to have been hitherto set forth. Dr. Douglass refers to it as follows:—

Connecticut emitted bills only for the present necessary charges of government upon funds of taxes until 1733. Having granted a charter for trade and commerce to a society in New London, this society manufactured some bills of their own; but, their currency being soon at a stand, the government were obliged, in justice to the possessors, to emit £50,000 upon loan, to enable those concerned in the society to pay off their society bills in colony bills. Their charter was vacated, and a wholesome law enacted, that for any single person or society of persons to emit and pass bills for commerce, or in imitation of colony bills, penalty should be as in case of forgery or of counterfeiting colony bills.*

Dr. J. Hammond Trumbull, in his First Essays at Banking, and the First Paper Money in New England, overlapped this period in his notes, but did not cover it in the text of his paper, making but a brief reference to the society in a note.† Dr. Henry Bronson's careful study of the public bills of credit of the colony of Connecticut, communicated to the New Haven



^{*} A Discourse concerning the Currencies, . . . p. 13.

[†] Proceedings American Antiquarian Society, October, 1884, Note D., p. 802.

Historical Society, treated of the colonial currency exclusively; and, although his subject brought him in touch with the transactions of the New London Society, he made no effort to analyze its affairs in detail.*

It is more than probable that materials may be found in Connecticut for a more complete history of this interesting experiment. The authorities for the foregoing account are practically confined to the colonial records and the Talcott papers in the publications of the Connecticut Historical Society. No person can rise from the perusal of these documents without feeling respect for the colonial government of Connecticut. The wisdom with which they treated the New London Society, whether we have regard to its peremptory closure or to the aid extended to its members in the performance of the duty imposed upon them to withdraw the circulation, is in marked contrast with the proceedings in Massachusetts under the arbitrary act of Parliament.

ANDREW MACFARLAND DAVIS.

*Historical Account of the Connecticut Currency, by Henry Bronson, M.D., New Haven Historical Society Papers, vol. i., following p. 170, with a pagination of its own. See the notes, pp. 43, 43, of the separate pagination.

LEVASSEUR'S "L'OUVRIER AMÉRICAIN." *

Economists need no assurance that M. Émile Levasseur's recently published treatise on the American Workman gives evidence of painstaking, exhaustive, and scholarly research; of this the author's great repute is in itself ample guarantee. No work in English is at all comparable to this able, statistically descriptive presentation of economic and social conditions in the United States; the work has been left for a foreigner to do, in a foreign tongue, under the direction of two foreign institutions of learning in the interests of a foreign constituency; and, except for the same author's three-volume study of the French population, the work is indeed unique.

Avowedly a study of the American workman in his environment, these two volumes comprehend a full account of the development of American industries, a statement of the material resources of the United States, a forecast of probable economic progress during the next twenty or thirty years, a comprehensive discussion of labor conditions and problems, of social dogmas and of political tendencies. The scope of the author's investigations may be gathered from the following selection of chapter titles: Food of Workmen, Clothing, Lodging, Loan and Building Associations, Savings and Insurance, Real Wages and the Workingman's Budget of Income and Expenditure, The Accumulation of Fortunes and American Democracy, Tariff, Poor Relief, Conciliation and Arbitration, Socialism, Labor Laws, Labor Organizations, Wages of Men, Wages of Women and Children, Sweating, Immigration, Strikes, Crises. These subjects are treated at length, as they concern the social and material welfare of American workmen. In contrast with some more pretentious compilations, supposed to be descriptive of American character and conditions, M. Levasseur's work gives evidence of a more courteous and sympathetic, as it is a more scholarly, consideration

*L'Ouvrier au Travail. L'Ouvrier chez lui. Les Questions Ouvrières. É. Levasseur. Paris, 1886.

of traits and institutions peculiarly American; and of the author's freedom from national prejudice — one had almost said egotism — which not infrequently characterizes the writings of those foreigners who have attempted to "do" the country in a few weeks' sojourn. The author briefly sets forth the character of the work which he has accomplished, as follows: "In the chapters of this work, I have presented in their several aspects the material and moral conditions which surround the American workman: first, as he appears in the workshop at work; and, secondly, as he appears in the home. I have set forth the relations existing between him and his employers and his hopes of social amelioration; and I have attempted to make of him a character study, which, if it is not complete, has at least been done in all sincerity."

In estimating the development of American industries during this century, more especially during the last fifty years, the economist is face to face with one of the most perplexing statistical problems. The rise of new industries the exploitation of new sources of power, the adoption of new processes of production, the reorganization of industry and the instability of values are variables tending to vitiate comparative statistical estimates of material resources, past and present. Even within any single industry permanently operating during the entire period considered, changes in processes and in organization make comparative estimates misleading. It is with a full appreciation of these difficulties that M. Levasseur has undertaken his account of the industrial development of the United States; and these difficulties he has overcome, where they are not insuperable. In the hands of a less skilful writer, so compendious an undertaking must have assumed the form of a compilation such as German scholars are more accustomed to undertake. It is a peculiar excellence in M. Levasseur's work that he has succeeded, in spite of the immense mass of detailed statistical and descriptive data brought together, in giving to it a form and character which once for all removes it from the category of mechanical compilations. The reader is made to feel that the material has been so handled and synthesized as to compose a real treatise on the American workman at work, at home, as a citizen; and

he is made to feel, further, that the author has indeed "chosen impartially," that he has not been blinded by a "national vanity" which might have led him to "misjudge unfamiliar manners and customs of living and thinking."

The American employer M. Levasseur finds energetic, disposed to fulfil the conditions of contracts entered into with his workmen and exacting a like fulfilment of contracts from them, somewhat self-centred, "profoundly individualistic," and disposed to regard his duties to his employees performed and his responsibility for their welfare ended with the payment of stipulated wages. "Socially, it results from this individualism that the relations existing between employer and employed do not extend beyond the factory door." Levasseur urges upon American workmen, employers and employed alike, the necessity of coming to a fuller mutual understanding of each other's needs and aspirations, and of cultivating reciprocal toleration. "It is to be hoped," he observes, "that employers may become less absolute in formulating their demands, and more generally conciliatory in dealing with their employed." And, on the other hand, "that labor organizations may manifest less defiance towards employers. and less hostility to propositions brought forward for the advantage of workmen." M. Levasseur, however, is too well aware of the new conditions in modern industrial organization which have complicated the relations of employer to employed to look for a "solution" of the labor problem, as some American sociologists are disposed to do, in a moral regeneration of the parties engaged in production. These writers, who insist upon such regeneration, insinuate more or less directly that there has been a moral degeneration; and the animus of the individual writer usually manifests itself in fastening this degeneration upon one or another - employing or employed class, according to personal prejudice.

Such an animus is manifest in the observation attributed to an American writer, that laborers are defiant because they are defying a class which has opposed every reform beneficial to them. It is altogether improbable that the reorganization of industry during this century, more particularly during the last quarter of the century,— obviously occasioned by the ex-

ploitation of new natural forces, the differentiation of employments, and the intenser capitalization of industry,—has been accompanied by any marked moral degeneration; and it is no more likely that a "solution" of the labor problem, in so far as that problem is peculiar to our present industrial organization, lies in the propagandic inculcation of "toleration and benevolence," or other virtues. The labor problem is inherent in the complexity of modern industrial conditions,—a complexity which defies simplification in the adjustment of individual interests. The problem is to bring some sort of harmony out of the conflict, real or apparent, of these interests; and no permanent harmony can or ought to depend upon forbearance and toleration. For, while there may be individuals in a community willing to sacrifice self-interests, there certainly are not industrial groups willing, as groups, to make such sacri-There is no organized industrial group in society to-day - whether of employers or employed, in industry, agriculture, or trade - which does not proclaim that it is receiving less than its dues, no group which manifests the least disposition to take a farthing less than the utmost it can exact from society. Each group is bound to seek its own interest, and, in a large sense, may be said to be right in doing so; and is bound to exploit less efficient industrial groups. That the "solution" of the labor problem, or composite of labor problems, does not devolve upon altruistic forbearance is sufficiently obvious when it is reflected that that solution is actually accomplished from day to day; that from day to day contracts for the employment of labor and capital are made, and the product of labor and capital is distributed in accordance with certain accepted principles of repartition. The higher co-operative organization of industry complicates the adjustment of individual claims; but some adjustment is accomplished, and the "solution" of the labor problem is effected by those actually engaged in the production of wealth.

Further, it is inconceivable that any of the parties concerned in this production should be materially influenced by would-be social reformers to forego any considerable share in the product of industry now apportioned to them in open com-

petition. Indeed, where competition is free, it is the only just regulator of incomes, of whatever character. Where the organization of industry has assumed a character which inhibits the free action of competition, free exercise of power on the part of the government may become expedient. But such exercise of power is always attended with risk. It carries in itself no guarantee that justice will be done, but only a guarantee that those intrusted with political power will seek to protect those classes and interests with which they are identified. While M. Levasseur does not find in that extension of government functions which naturally accompanies the development of modern industrialism any fatalistic progress towards socialism, he does find in the mass of labor legislation passed in the United States during the last few years what appears to him to be abundant evidence of a class legislation entirely inconsistent with democratic principles of government. And he therefore regards with suspicion any extension of government management into the domain of private industry. A solution of the labor problem dependent upon arbitrary exercise of power by the State endangers individual freedom, and in a democracy tends towards a régime of class domination.

The American workman at work M. Levasseur finds efficient and well paid; at home, well fed, clothed, and lodged; as a citizen, self-reliant and prosperous,—his great material prosperity itself at once occasioning and accounting for the turbulence and discontent which he at times so freely manifests.

It remained for M. Levasseur to discover among those "multiple, complex, and at times discordant characteristics of the American workman, completely naturalized for several generations," traits of character sufficiently universal to warrant the establishment of a type supérieur. M. Levasseur contemplates the perpetuation and greater differentiation of this superior type of workman under the conditions of education and social environment which obtain in the United States. "This type," he says, "will persist during the next century, however great the mélange of different and inferior types infused into the American industrial population."

American economists have not infrequently insisted upon the superior efficiency of the American workman. That superiority, however, they have been accustomed to associate with the selective influences of immigration; and they have not been able sufficiently to remove themselves from their immediate environment to detect the existence of national character. Probably no population presents a greater diversity of types than the population of the United States. No population is in its make-up more heterogeneous. And the question naturally arises whether after all the peculiar efficiency of the American workman is more than a direct, perhaps even a temporary, reaction upon environment, whether the superiority really lies in the workman or in his environment. Our industrial groups range through every grade of efficiency and comprise every nationality; and, if M. Levasseur has chosen a workman of superior efficiency as typical of American industry, another writer, equally observing and accurate, less optimistically disposed, might possibly have made out another type equally common and equally "American." Placed in a land of immense natural resources, the American is pre-eminently a wealth-producer, energetic and efficient; but the solidarity of the American people,—does it not rest rather upon community of interests than upon any national community of customs and character?

M. Levasseur presents data which seem to him to prove conclusively that during this century, especially during the last fifty years, American industry in general has had "an ample and magnificent development"; and he enumerates among the chief causes of this development that inventive mechanical ingenuity which, manifesting itself as it does in a multiplicity of inventions, he is pleased to consider a noteworthy national characteristic of Americans.

American producers have long felt the strain consequent on the rapid displacement of old machinery by new and more efficient machinery. This superannuation of fixed plant is so rapid as greatly to enhance the risks attendant upon productive enterprises in the United States, since it renders that element of cost which represents wear and tear of fixed plant incalculable. The greater the investment, the greater the loss consequent upon the introduction of new mechanical devices. It may be further observed that inventions which promise any considerable economy in the application of labor or capital ordinarily attract new investments of capital seeking to reap the immediate gain arising from the new economy, and that these new investors have every advantage in competing with the old producers, whom they have forced to adopt, at whatever cost, the new methods of economy. The losses consequent upon this displacement of vested capital are immediate and indefinitely great; while the profits arising from the new economy in the application of labor and capital are remote, and distributed over an indefinite period.

A further result which may follow the adoption of a new method of production or a new mechanical device, and one which seems not to have been so commonly noted by economists, is that a permanent reduction in the sum total value of the product of an industry may accompany this destruction of fixed capital. This will always follow when the nature of the product is such that a decline in its value does not stimulate a proportional increase in its consumption. Here, also, the value of the capital employed in the industry is bound to decline. When, however, the new demand maintains the value of the product, the value of the capital employed may or may not decline, according as the new economy consists in more efficient machinery or in the substitution of machine work for hand labor. To simplify implements and reduce the proportion of capital employed to materials used is the effect of those economies resulting from inventions commonly referred to as improvements. These improvements tend to reduce the value of wealth accumulated within a community; but an opposing tendency is found in that increased demand which accompanies a cheapening of the product. Only those inventions which supplant manual labor by machine work tend directly to increase the accumulation of capital.

The motive which has led to the introduction of machinery, in the United States as in other countries, lies obviously in the economy of labor resulting therefrom; and it would seem unnecessary to seek other motives. M. Levasseur, however, would find an additional incentive for American employers in

the general high rate of wages paid American labor. "The higher the wages," writes M. Levasseur, "the greater the incentive for an employer to economize manual labor": and he illustrates by supposing a machine which will last ten years, costing 50,000 francs and economizing the work of four men, proposed for adoption to an employer paving wages at the rate of 2,000 francs a year. Obviously, the employer will introduce the machine, and save 3,000 francs annually; while an employer paying wages at the rate of 1,000 francs will just as obviously not introduce the machine, since it will occasion him a loss of 1,000 francs a year. The economy of the machine in one case and of the manual labor in the other is sufficiently obvious under the conditions supposed; but the deductions drawn therefrom appear a bit fallacious, when it is borne in mind that the cost of the machine is itself dependent upon wages paid to workmen employed in its construction. In the country where wages were 1,000 francs, the machine would probably have cost but 25,000 francs, so that the same economy must have resulted from its employment in either case. Where wages are high, the cost of the machine is high also. The real incentive to the introduction of machinery lies not in the rate of wages, but in the economy of labor.

In considering the general rate of wages in the United States, M. Levasseur is led to discuss the causes regulating normal wages; and, after insisting upon the futility of assigning any one simple cause as the sole regulator of wages, he proposes the following formula: "Wages are regulated by divers complex causes, which act severally upon supply and demand, determining the special rate within each industry and for each individual. From these special rates statistics attempt to deduce the general average rate within a country." These causes he enumerates as follows: (1) productivity; (2) competition; (8) cost of living; (4) capital employed as fixed and circulating (the last corresponding with the wages fund), taking into account rapidity of circulation; (5) activity of production and "amount of consumption soliciting production." "These causes," concludes M. Levasseur, "act wherever the contract of labor is free, in America as well as in Europe. Several of these causes, however, act with greater intensity in

America than in Europe. Productivity, which is on the average higher, the cost of living, which is greater, and the circulation of wealth, which is rapid, tend to raise the average rate of wages; while competition which is due to immigration tends to force wages down."

Economists have pretty generally recognized the fact that the amount of product to be apportioned is determined by the productivity of labor and capital, while competition, on the one hand of labor and on the other of capital, determines the repartition of the product; but that the cost of living in a country is in any sense a co-ordinate cause, regulating wages, many will be disposed to deny. To say that wages are regulated at all by cost of living seems equivalent to the assertion that what a laborer spends regulates what he gets. Further, it is difficult to attach to the last two causes mentioned above any significance which will make them independent causes not already designated under productivity and competition of labor and capital. Indeed, if an enumeration in detail of the complex causes affecting wages, or even of the more important causes so acting in any one country, such as the United States. is here contemplated, the enumeration is quite incomplete, such an enumeration in detail of causes regulating the rate of wages must mention as chief among these the natural resources of the country, state of the arts and sciences, education and efficiency of laborers and employers; while, as a recitation of general causes regulating wages, the co-ordination appears altogether unsatisfactory.

M. Levasseur hazards an estimate of average wages in the United States for men employed in industry during the years 1890-98. The average, he believes, ranged from \$1.75 to \$2.00 a day. He insists, however, that the elements are too diverse and incomplete to be calculated; and the data immediately presented would seem to bear witness to the unsatisfactory character of such averages. The paragraph immediately following the one in which the above calculation is made quotes from the Aldrich report average wages for July, 1891, at \$2.07. On the opposite page, data for 1895 quote average wages in four cities, as follows: Baltimore, \$1.93; Boston, \$2.61; New York, \$2.34; Philadelphia, \$2.34. In a note appended on the

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same page average wages are estimated of 83,051 employees - men, women, and children - in Connecticut during 1896 at \$1.66, and in several industries respectively at \$2.15, \$2.04, \$2.15, \$1.76, \$1.92, \$1.64,— the highest wages being five or six dollars and the lowest fifty cents a day. The insignificant character of any average rate of wages is sufficiently obvious. It appears that we have in the United States, more especially in our cities, a considerable class unable, either from indisposition, intemperance, inefficiency, or accident of environment, to support themselves, and it follows necessarily that we have also individuals living in every state, from absolute poverty to luxurious abundance. This is true not only of the United States, but of all other countries. To say that average wages in the United States are higher than in some other countries can mean only that the class whose wages are at the higher level probably forms a larger proportion of the total population in one community than in the other. But of this we may not be sure, since the average does not indicate how the wages are distributed. An average wage of \$2.50 a day may indicate that there are 100,000 laborers at \$2.00 and 20,-000 at \$5.00, or it may mean 100,000 men at \$2.00 and 100,000 at \$3.00, or 50.000 men at \$1.00, 50,000 at \$2.00, 50,000 at \$3.00, and 50,000 at \$4.00. The possibilities are indefinitely great. Furthermore, aside from the insignificant character of any average rate of wages, considerable ambiguity attaches to the general statement that average wages in the United States are higher than average wages in European countries. Does the statement mean that laborers in the United States, working under the same conditions, producing the same product, and employing the same amount of capital, receive a greater share of the product? or that laborers employing the same amount of capital, working under like conditions, are more productive in the United States? or that, other things being equal, owing to the employment of machinery, labor and capital are both more productive, and that consequently the general level of both wages and profits is higher?

In his discussion of wages M. Levasseur raises a question which he regards as still in controversy in economic theory,—namely, "whether demand regulates supply, or supply de-

mand"; and he concludes that "a free consumption of goods in a population by absorbing the product of industry stimulates production." Economists have for a long time fully appreciated the ambiguity popularly attaching to the terms "demand" and "supply." Simply stated, the scientific formula that demand must equal supply resolves itself into the self-evident thesis that a population must produce what it consumes. There is here involved no question of economic distribution at all, but only a question of amount of product to be distributed. And this holds true not only of the population as a whole, but of every industrial group within the population. In a sense, just as every individual within a community wants and would consume more than he is willing or able to earn, so every group wants and would consume more than it can or will earn; but this is not economic demand. Just as the labor of every individual has its economic value, great or small, so has the labor of every industrial group within the community a value determined by competition and efficiency. The ultimate demand of any group is measured by the amount of the labor exerted. The number of hours constituting a day's labor within any group is determined by the marginal utility of the product per hour. Each additional hour worked adds an increase of product possessing less and less marginal utility, while the sacrifice involved in each additional hour's work is an increasing one. The number of hours worked per day is fixed at that point where the sacrifice undergone is exactly rewarded by the marginal utility of that hour's product. The choice made by a group of laborers in adopting an eight-hour day is for release from further toil in preference to further reward, which might result from a ninth or tenth hour of work. The efficient economic demand of a group is measured by the labor performed by that group. It is labor exerted, not consumption of goods, which constitutes the demand. This was sufficiently obvious under simpler conditions of production, where individual producers brought their completed product to market and there exchanged it against other goods. That the division of labor now makes it necessary for groups of laborers to combine in the production of a single article may complicate the problem of distribution of the product of labor,

but does not alter the economic laws in accordance with which that distribution takes place. Great economic demand or consumption, therefore, may be an evidence of productive activity, but does not in itself stimulate that activity.

M. Levasseur concludes that the rate of wages within the United States is likely to remain high for a considerable period to come, owing to the great productivity of industry and accumulated wealth within the country. Whether that rate will rise or fall he considers a "delicate question, to which one may only reply, 'perhaps.' If the increase in the demand for labor, in agriculture as well as in industry, should not continue to absorb so easily in the future as it has done up to the present time the increment arising from immigration, wages may decline. Furthermore, there appears to me as great a likelihood of a decline in wages during the next thirty years, owing to the abundant supply of labor, as there is likelihood of a rise, resulting from productivity and from a distribution of the product of industry more favorable to labor." This certainly is a significant expression of opinion by one who may speak with authority. Nevertheless, it is difficult to see how such a conclusion is warranted by the data presented in M. Levasseur's pages. That the number of immigrants arriving from year to year should be sufficient to cause a lowering of the general rate of wages in the immediate future seems unlikely. The average annual immigration during the last seventy-five years of this century has amounted to less than 250,000 men, women, and children. Even if we accept M. Levasseur's statement that "the United States, with a population made up entirely from immigration, cannot now renounce its origin and close its frontiers to the further accessions of that character," on the supposition that immigration shall remain during the next thirty years unrestricted by legislation, and that the tide of immigration still flows on at the rate maintained during this century, an increment of 250,000 must prove insignificant in a population which will undoubtedly equal 100,000,000 in the course of the next ten or fifteen years. But, if immigration should really "cast a shadow over the whole laboring class," the nature of our origin will hardly stand in the way of such restrictive legisla-

tion as may appear advantageous. Certainly, the United States is not bound to receive within its borders immigrants of an objectionable character: in fact, it is not unlikely that those natural barriers which have tended to disappear with increasing facilities for cheap and quick transportation, will be succeeded by artificial restrictions of one kind or another. The real reasons for placing restrictions upon immigration, however, are not to-day - nor are they likely to be in the future - economic. The introduction into any community of an abundant supply of cheap labor is economically advantageous to those exploiting the cheap labor, in much the same way as is the introduction of cheap and efficient machinery. There is no reason to fear that a community will get its work performed too cheaply. If, however, the labor coming to us from Europe is as efficient as native American labor, it will earn equally high wages. If less efficient, wages correspondingly lower. If less efficient, such labor cannot compete with native American labor on an equal footing. It will add another group of labor to our industrial population possessing a smaller productive capacity, receiving, consequently, lower wages, and maintaining a lower standard of living. The fear that such a class of laborers might displace and reduce the wages of more efficient laborers is as groundless as the fear that the introduction of improved machinery will work the same injury. So far, therefore, as the high rate of wages in the United States is due to greater efficiency, there is no reason to fear that the introduction of cheaper labor will cause a lowering of that rate.

If wages decline in the United States, it must be due to the fact that the field of employment is so occupied by increasing population as to bring into operation the law of diminishing returns, thus impairing the general productivity of labor and capital; and that any such overcrowding of the field of employment, necessitating a lower standard of living, is likely to occur in a democracy, the history of the French population itself would seem sufficient to disprove. The decline in the rate of natality already manifest among the native American population is a further evidence that in a democracy the movement is naturally from a lower to a higher standard of living.

M. Levasseur predicts that this decline in the rate of wages, should it occur during the next twenty or thirty years, will meet with the most determined opposition on the part of organized labor, and that "in such an event the repartition of the product of industry between the three factors of production will be so modified by that opposition that employers of labor will be forced to lower the rate of profits, and more than in proportion to the decline in the rate of wages." But, if laborers by simple organization and determined opposition can in such event force down the rate of profits, why may they not affect the same results under normal conditions? And, if the rate of profits is not determined in accordance with some economic law of distribution, if it is not dependent upon the conditions of production and the accumulation of capital seeking employment, what is to prevent laborers by organization and determined effort from wiping out profits altogether? Either it is true or it is not that the repartition of the product of industry rests upon economic laws; and, if not, why, especially in a democracy, should not all of that product be turned over to the laborers in the form of wages? The executive capacity which enables employers to-day to command great reward for their services is not likely, in the course of an industrial evolution which every year more and more complicates the direction of labor, to decline in value nor to content itself with lower rewards; while, surely, the return to capital as such, however settled, is not subject to scaling ad libitum by simple pressure from organized labor.

In considering some of the economic aspects of modern capitalism M. Levasseur raises a question which has been the subject recently of much popular discussion; i.e., whether the introduction and employment of machinery may not occasion an overproduction of wealth. By a simple train of reasoning the reader is brought to the conclusion that "there can never be in the world too much wealth." This overworked economic epigram has served well enough in its day as a quietus upon those who proposed the theory of overproduction in all its naïve fallacious simplicity; but it is no answer to the more clever and better informed overproductionists of to-day. These writers are far too clever to make the crude assertion

that there can be too much wealth in the world. The gist of their contention lies in the assertion, not that there is too much wealth produced, but that wealth gets into the wrong hands; namely, into the hands of those who do not wish to consume it, while those who have the wish to consume have not the power. "The power to consume and the wish to consume reside in different individuals." The fallacy here is of a more subtle character, and arises from an incomplete conception of economic production. The obvious fact in economic production is that a little labor on a great machine suffices to produce a great amount of wealth. Of this great product a small portion is turned over to laborers in the form of wages. For the rest there is no demand. The owner cannot consume it because it is his capital, and in a form inconsumable so far as he is concerned: the laborers cannot consume it because they already have their wages, and so have no claim on the product remaining. The fallacy lies in overlooking the cost of the machine, and in supposing that the product can generally retain an exchange value independent of that cost, the fact being that such an artificial value can be maintained only in special cases, as where patent rights have been issued or where values are in a state of transition, adjusting themselves to new labor costs. Where values are in a state of equilibrium, there is no excess product over the cost of production. In other words, the value of the product is made up of wages paid directly by the employer to his employees, and wages paid by him indirectly in the purchase of the machine, including under "wages" wages of superintendence. So that the value of the product is normally consumed during the process of produc-How, then, can this process result in general overproduction?

It is probably in his constructive economic reasoning that M. Levasseur lays himself most open to adverse criticisms. In justice to the author, however, it is to be stated that he does not offer the present work as a treatise in economic science. On the contrary, M. Levasseur frankly everywhere subordinates "theory" to historical, statistical, and narrative description. His subject, however, is one which does not lend itself to purely descriptive treatment; and frequently he is

led into the intricacies of abstract science. Since the welfare of the American workman depends upon the maintenance in the United States of a high rate of wages, M. Levasseur is led to consider the causes regulating that rate. So, in adverting to current social dogmas, labor legislation, State interference, and the like, M. Levasseur is repeatedly led away from the concrete. Nevertheless, the work has, as its author intended it should have, the "character chiefly of an economic history." "An interest attaches to economic phenomena," he observes in his preface, "in and of themselves, independently of possible generalizations. To observe accurately as great a number as possible of these phenomena is an author's first task; his second, to choose among the mass of phenomena with discrimination and with a due sense of his own responsibility." In rendering his account of the American workman strictly impartial, M. Levasseur has chosen to introduce a somewhat unrefined mass of data. Perhaps to American readers it will appear that M. Levasseur's desire to be impartial has somewhat inhibited his selective judgment in the choice of data American readers would have welcomed and authorities. from so renowned a scholar a more critical handling of material. But this very freedom from personal coloring is unquestionably a chief excellence in the work, considered as a manual of information for French readers.

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NOTES AND MEMORANDA.

THE INDIA CURRENCY PROPOSALS.

It is a matter of some surprise that the Currency Proposals recently submitted by the government of India to the Secretary of State for India in London have attracted so little attention on this side of the Atlantic. Garbled statements have appeared in the papers from time to time, and incidental reference to the proposed measures was made by several speakers in the course of the Senate debate upon the silver seigniorage coinage clause of the war revenue bill. In the main, however, there has been neither a full understanding of the nature of the Proposals nor any appreciation of the stir which their publication has caused in English commercial and financial circles.

It is now admitted alike by opponents and advocates of the closure of the Indian mints to the coinage of rupees in 1893 that this action was taken without any clearly defined policy as to the subsequent steps which it rendered necessary. The Indian government has upon every occasion since asserted that the establishment of a gold standard was then already in view. But it seems clear that the anticipated program was little better than a policy of monetary drift, and that it was expected to attain a higher exchange,—that is, a higher gold value of the rupee, - simply by the natural expansion of Indian trade and commerce relative to a stationary or, indeed, to a gradually diminishing rupee currency. A maximum to this appreciation and a channel for the expected influx of gold were defined by the Notifications of June 23, 1893, whereby gold was made receivable at the Indian treasuries in payment of public dues and at the mints in exchange for rupees, at the rate of one sovereign for fifteen rupees. In short, it was hoped to stabilize exchange at 1s. 4d. by the introduction of a scarcity rupee.

Five years have since elapsed; and, despite the cessation of rupee coinage and the periodic suspension of Council Bill sales, together with heavy borrowings in London, Indian exchange has not been definitely established at the desired rate. The average exchange value of the rupee realized by the Indian government has been 14.547d. in 1893-94, 13.101d. in 1894-95, 13.680d. in 1895-96, 14.449d. in 1896-97. Some months ago exchange hovered near the maximum point; and provision was made, by the amendment of the Indian Paper Currency Act, for the telegraphic issue of rupees in India upon the deposit of gold in London at a rate slightly above 16d. Exchange speedily relapsed, however. Not a sovereign was so tendered; and it is now openly admitted by the India Council that the automatic accumulation of gold in this manner is "extremely unlikely."

The upward course of the rupee has unquestionably made it easier for the Indian government to meet its sterling charges. On the other hand, it has left trade with India still exposed to the fluctuations of exchange; and, by stimulating the withdrawal of capital from India while exchange is high and uncertain, it has created a money famine, of which incidents have been a bank rate of from 10 to 12 per cent. and the refusal of loans upon the security of gold bars. Leaving out of account the possible effects of the mint closure upon the competitive trade of India and upon the value of the native hoards of uncoined silver, it will be seen that the evil of a depreciating rupee has been corrected, the mischief of a fluctuating rupee remains.

In a remarkable despatch of September 16, 1897, in reference to the preliminary bimetallic agreement arrived at by France and the United States, the government of India characterized that date as "a time when we are to all appearances approaching the attainment of stability in exchange by the operations of our own isolated and independent action." To persons practically concerned with Indian exchange and to students of the Indian currency question, this roseate view seemed unwarranted and misleading. Whatever doubt may have existed as to the fact has been completely dispelled by the course of subsequent events; and the Indian government



has been finally led by the intolerable condition of affairs in India, and by the growing discontent in England with the policy of waiting for the country to grow up to a 16d rupee, to an admission of the inadequacy of the passive course hitherto pursued and to the proposal of certain drastic measures for attaining that same end. These proposed measures are embodied in a despatch of March 3, 1898, and have been referred to a Special Committee appointed by the Secretary of State for India, under the chairmanship of Sir Henry H. Fowler, to take into consideration the whole subject of the Indian currency system.

The key-note of the proposed change is an outright contraction of the rupee currency to the degree necessary to establish a 16d. exchange, with a replacement of the resulting treasury deficit by gold borrowed in London and ultimately available for currency purposes. The total rupee currency of India is estimated as somewhere about 120 crores (1,200 million rupees), exclusive of a fiduciary circulation of 10 crores of currency notes. It is assumed that this amount is redundant, relative to the proposed sterling equivalent of the rupee. To what extent contraction is necessary to attain a 16d. exchange, no attempt is made to determine; but 24 crores—the amount of currency notes in circulation—is arbitrarily hit upon as "the outside limit," and the opinion is expressed that the amount really necessary will be far short of this.

The mere accumulation and segregation in the Indian treasury of the, say, 20 crores necessary to reduce the circulation to the proper point is regarded as open to the double objection of losing the interest upon the sum thus permanently locked up, while the very existence of such an accumulation of silver coin would be a perpetual menace to the exchange market. Accordingly, it is proposed to effect a permanent contraction by melting down the rupees withdrawn from circulation, and selling the bullion silver in the native market. This is to be done at the rate of 10 crores a year, worth as bullion — with silver at its present value — about 6 crores. It is naīvely assumed that these sales can be effected without depressing silver, since the average annual imports of the metal into India since the closure of the mints have been about 6

crores. After two years the Indian currency will have been reduced two hundred million rupees by these operations. One hundred and twenty million rupees will have been secured by the sale of the bullion and paid over into the Indian treasury, leaving a deficit in the treasury balances of eighty million rupees to be supplied by gold borrowed in London. Estimating the rupee at 16d, the sum of £5,300,000 will be required for this purpose. If the bullion silver sold realizes a lower price or if additional sales are necessary, the treasury deficit will be greater, and more gold must be borrowed. In any event, authority is asked for a maximum loan of £20,000,000, of which one-fourth is to be borrowed and shipped at once.

This gold is to be ultimately available for currency purposes, but it is not to be parted with until an exchange rate of 16d. has been attained. By the end of two years, if not before, it is believed that the rupee will have become stable at 16d. Should this not prove to be the case, the same process of contraction is to be continued until the desired result is attained, after which gold will flow into the country and the Treasury will release its own holdings!

In short, the reform is to be accomplished by an outright reduction within two years of one-sixth in the amount of the rupee currency, and this process of contraction is to be continued until the proposed exchange rate has been attained. Bearing in mind that in a country such as India the evils of contraction are felt in much more than direct proportion with the actual reduction in the currency, it will be seen why the scheme, for this reason alone, has been pronounced by thoughtful men of every shade of monetary opinion crude in theory and pitiless in practice.

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RECENT STATISTICS ON WAGES.

The statistical material relating to the course of wages and the progress of the working classes during the last two generations has been enriched by two recent publications,—one a brief report by the Massachusetts Bureau of Statistics of Labor, the other an elaborate report by the French Office du Travail. Both investigations were directed to the condition of workmen over a long series of years, and refer to the course of retail prices as well as of money wages; and both are of value alike on the social and on the monetary aspects of recent economic history.

The Massachusetts Report * continues previous inquiries on the same subject, with the result that we have figures on wages and on retail prices collected on a like method for the same industries and the same articles for the years 1860, 1872, 1878, 1891, and 1897. No attempt is made to work out an index number summarizing the general movement; and, in view of the fact that figures could not be secured continuously for each of the selected years, it was doubtless wise not to attempt to construct a representative scale of a disputable sort. But the general course of events is clear from an inspection of the tables. Money wages were lowest, almost without exception, in the initial year 1860, and at each of the later years were higher than they were at the beginning. As to the years 1872, 1881, and 1897 (which cover the muchdisputed period since the fatal year 1873) the results are thus summarized in the report: "In general, the returns indicate higher wage rates in 1897 than in 1881, only eight of the classified industries in the list presenting exceptions. Of these industries, however, two show a higher rate in 1897 than in 1872. On the contrary, a decline in general appears between 1897 and 1872. To this statement, four industries present exceptions. Two of these - namely, the Building Trade and Carpetings --- show an increase in 1897 as compared with both

* See the Twenty-eighth Annual Report of the Massachusetts Bureau of Statistics of Labor, 1897, Part I., pp. 1-42.

1881 and 1872." It need hardly be said that the figures for 1872 were corrected for the depreciated paper of that time, and arranged on a gold basis. It is probable, indeed, that in gauging the significance of the figures for that year some further allowance should be made for the inflated conditions of the speculative period 1871–78; but here questions of interpretation arise with which the statistician is not called on to deal.

As to prices, the results are of a more familiar sort, though they are of unusual value in that they give retail prices carefully collected for articles of uniform quality. Nearly all things have gone down in price, even rents. "As compared with 1872, all the articles of Groceries show lower prices in 1897 except corn-meal, and all the articles of Provisions except mutton chops." On the family budget method,— that followed in the Aldrich Report of 1892,—it is calculated that for a representative family the decline in the expense of groceries was in 1897 6.67 per cent. as compared with 1881 and 30 per cent. as compared with 1872; while for provisions the decline was 18.52 per cent. as compared both with 1872 and 1881.

The French investigation is much more elaborate. It covers the period from 1840 to 1897, fills four portly volumes, and gives a vast array of figures in detail.* The material here collected will be of service in many directions to the statistician and to the student of economic history. On the general course of money wages in France the introduction to the concluding volume gives "quelques chiffres [qui] vont suffire a marquer le chemin parcouru." These figures, indicating the trend of money wages during the past half-century, are as follows (in francs):—

* Office du Travail: Salaires et Durée du Travail dans l'Industrie Française.

Tome I., Département de la Seine; Tome II., III., Départements autres que celui de la Seine; Tome IV., Résultats Généraux. Paris: Imprimerie Nationale, 1897.

	1840-45	185 3 -57	1860-65	1874	1891-93
All workmen in the departments *.	2.07	-	2.76	_	8.90
All workwomen in the departments	1.02	-	1.30	-	2.15
All workers in coal mines	2.10	2.35	2.60	3.56	4.20
Masons in the departments	-	2.25	-	3.15	4.05
Masons in Paris	4.15	4.25	5.25	5.50	7.50

Elsewhere another summary table is given, resting on the same set of data. The figures in this case are arranged on an index number plan, the number 100 indicating the rate of wages for 1891-93.†

	1840-45	1853	1860-65	1874	z883	1891-93
All workmen	52	-	69	-	-	100
Masons (provinces)	_	52	-	78	91	100
Day laborers (provinces)	-	49	-	80	89	100
Carpenters (provinces)	-	51	-	80	92	100
Painters (provinces)	-	52	-	76	90	100
Nine classes of workmen (provinces)	_	52	_	79	90	100
All workers in coal mines	50	52	62	85	91	100
Building trades in Paris	54	57	70	77	100	100
Normal index number for each period	52	52	68	80	91	100

Money wages thus have doubled in the course of the half-century; and, what is more significant, they have continued to advance during the latter part of the period (i.e., since 1878), when the prices of commodities have been falling.

 $^{^{\}circ}$ I.s., not including the Department of the Seine. The table appears at p. 25 of the general introduction to Volume IV.

[†] The table appears at p. 277, Vol. IV.

As to the prices of commodities bought by workmen, the French inquiry makes comparison chiefly between the beginning and the close of the period. During the half-century between 1840 and 1891-93 it appears that retail prices have risen, but not so much as money wages. Rents, it is true, have more than doubled (and it is to be assumed, though it is not expressly stated, that the "logement" which has thus appreciated is of the same quality). But food has been so cheapened that for lodging and for the same nourishment the workman needs to spend but 25 per cent, more; while for clothing and other things prices have so far fallen as to bring down to an even smaller figure the increase in the "frais d'un même genre d'existence." It is noted, also, that the distribution of the expenditure of the workmen, under these steadily improving conditions, has not much varied. About the same proportion of income continues to go to lodging, to food, and to other things; whence it follows, as the price of objects of necessity has advanced but little, that their consumption has greatly increased.

No such careful comparison is made as to the expenses of living during the later part of the period; i.e., during the twenty years from 1873 to 1893. But for Paris the following instructive figures are given, indicating what was the annual expense for a Parisian workman of an estimated ration,—so much bread, so much meat, so much fuel, and so on. Such a budget would show the following results for decennial periods:—

931 fr.	120 fr.	1,051 fr.
1,052	170	1,222
1,075	220	1,295
1,093	270	1,313
993	320	1,353
	1,05 2 1,075 1,093	1,052 170 1,075 220 1,093 270

Food, light, heat, increased in price until 1873, and since then have fallen in price. Clothing has probably fallen in price throughout the period, while rents seem to have risen throughout. Since 1873 the movement of wages and prices has been inverse: wages have risen, while prices have fallen.

From both investigations it appears that money wages have not shared the downward movement which the prices of commodities have shown since 1873. In France money wages clearly have advanced. In Massachusetts they at least held their own between 1881 and 1897. It is true that some decline appears for Massachusetts in 1897 as compared with 1872, but it is a question how far the year 1872 affords a satisfactory basis for comparison; while the year 1881, when specie payments had been resumed and prosperity had fully set in, may give such a basis. The statistical material on this part of the history of prices still needs to be completed and carefully worked over; but the inquiries here summarized confirm the general conclusion that, during the period in which the much-discussed fall in prices has taken place, money incomes have either remained stationary or have risen,—at all events, have not fallen; an aspect of the "appreciation" of gold which deserves more attentive consideration than it commonly receives.

Among recent announcements we note the Science of Finance, by Professor Henry C. Adams, to be published shortly by Messrs. Henry Holt & Co. The book will suggest a financial system taking into view the necessities of the federal government and of the several States and their local bodies. The same firm will publish, in the course of the winter, a volume of selected essays in economics by the late Francis A. Walker. Messrs. Macmillan announce The Distribution of Wealth, by Professor John B. Clark, and Elements of Sociology, by Professor F. H. Giddings.

THE Parliamentary Committee on Old Age Pensions, appointed in 1896, has made a report (dated June, 1898) the gist of which is that no recommendable scheme was discovered. It should be noted, however, that the committee, by the terms of the reference, found itself precluded from considering schemes based on compulsion, and hence could not examine any plan, on the principle of the German system, for a universal grant of pensions or for compulsory contributions towards pension funds. There remained only plans in which some voluntary contribution or provision was a condition of aid. As to all such, the committee concluded that, on the one hand, they would be limited in their effect to a small section of the community, not including the persons most in need of relief; while, on the other hand, they would Hence the negative conclusion of the discourage thrift. report, which doubtless disposes of the old age proposals for the time being. None the less, all signs point to the continued discussion of the subject, and to the discovery and enactment, sooner or later, of some acceptable scheme, possibly going the length of the compulsory and universal provision, which this committee was not instructed to consider.

Almost simultaneously with the passage of the French Workmen's Compensation Act, described in the last number of this Journal, a similar measure for the compensation of workmen injured by accident was enacted in Italy, bearing date March 17 of the current year, and going into effect October 1. While accepting the principle of compulsion, and therein following the German measure from which has come the main impulse to this form of labor legislation, the Italian act is like the English and the French in that it leaves some choice as to the mode in which the required provision shall be made.

It establishes compulsory insurance of workmen against accident at the charge of their employers. All workmen employed in manufacturing enterprises where power is used (provided as many as five are employed), all in mines, railways, and transportation, building operations, and the like, are to be insured; but agriculture and shipping are not affected. The indemnity in case of complete and permanent disability is five times the yearly wages, but not less than 3,000 lire; in case of partial disability, a sum proportionally reduced. Where there is temporary disability, the indemnity is one-half the wages if the disability is complete, and proportionally less if it is partial. If the accident results in death, the workman's heirs get five times his yearly wages in a lump sum. The employers may assume their obligations for themselves, may insure in insurance companies of the ordinary form, or may form mutual insurance associations of their own. If permanent total disability ensues, the indemnity must usually be turned over to the State Pension Fund, which is then to pay an annuity to the injured workman. The contingency of the employer's insolvency seems to be less carefully guarded against than in the French law, the only provision being that all receipts from fines and other windfalls shall be set aside to meet such defaulted payments.*

In general, the expectation of the Italian legislators, as of the French and English, has evidently been that employers

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The text of the act has been printed by the Ministry of Agriculture, Manufactures, and Commerce (Rome: Tipografia Nazionale di G. Rertero). A careful summary of the provisions is in the English Labour Gasette for May, 1898.

will be led to insure themselves against the obligation to indemnify for accidents, and that the effect of compulsion will be, not a great growth of government administrative machinery, but a wide use of mutual insurance associations. Yet the drastic principle of compulsion remains in the act, which thus marks another step in the rapidly spreading system of compulsory provision against workmen's accidents by their employers.

THE "War Revenue Act," passed by Congress on June 18 of the current year, contains some provisions which are likely to be of lasting importance. While the internal taxes levied by the act may come to be permanently incorporated, in greater part or less, in the federal revenue system, their future is quite uncertain; and, at the least, they will almost certainly be much remodelled. Some fiscal and monetary matters, however, are disposed of probably once for all.

The fiscal position of the Treasury of the United States is greatly strengthened, not so much for the immediate exigency as for its operations in the long run, by general authority to borrow from time to time, by means of notes running not more than a year, to the extent of one hundred millions. The Secretary may borrow "such sums as, in his judgment, may be necessary to meet public expenditures." The authority given elsewhere in the act for the issue of bonds is limited, being available only for war expenditures; but that for the temporary notes is unrestricted except as to amount, and will remain so long as this section is not specifically repealed. The need of some elastic resource of this kind has long been obvious, and the failure to supply it has been due mainly to the unfortunate intertwining of the routine affairs of the Treasury with the disputed monetary questions. Such simple and sensible authority as is now given would have vastly bettered the situation in 1894-95, when the loans of the Cleveland administration were made. While not likely to be resorted to in the near future, it is certain that the time will come when this power in the hands of the Secretary, now so readily given, will prove of inestimable benefit.

On the currency situation a last step is taken towards winding up the consequences of the anomalous legislation of 1890. The silver-purchase act of that year had provided that, of the Treasury notes put forth in payment of silver bullion, "no greater or less amount shall be outstanding at any time than the cost of the silver bullion and the standard silver dollars coined therefrom, then held in the Treasury purchased by such notes." Whatever uncertainty may have resulted from this puzzling proviso has now been removed by the requirement that each month at least one and one-half million silver dollars shall be coined from the bullion purchased, until all of it is converted into coin. The paper representatives of this coin - whether Treasury notes or silver certificates - must then be no less than the amount of the coin; since this coin is to be "used and applied in the manner and for the purposes named in said act" of 1890. Every ounce of the silver bought under that act is to be coined into silver dollars, and these, or their paper representatives, must take their place in the nation's currency.

It may not be amiss to recall that the Treasury records show that under the act of 1890 there were purchased 168.7 millions of ounces of silver. From these there had been coined, up to July 1 of this year, 78.7 millions of silver dollars. There remained on hand, on July 1, 107.7 millions ounces of bullion, which, when coined, will make 139.2 millions silver dollars. The amount of silver currency — whether in the form of dollars, certificates, or Treasury notes — by which the money of the country will be enlarged under the act of 1890 and its sequel thus reaches the imposing total of 218 millions of dollars.

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THE

QUARTERLY JOURNAL

OF

ECONOMICS

JANUARY, 1899

THE PRECONCEPTIONS OF ECONOMIC SCIENCE.

I.

In an earlier paper * the view has been expressed that the economics handed down by the great writers of a past generation is substantially a taxonomic science. A view of much the same purport, so far as concerns the point here immediately in question, is presented in an admirably lucid and cogent way by Professor Clark in a recent number of this journal.† There is no wish hereby to burden Professor Clark with a putative sponsorship of any ungraceful or questionable generalizations reached in working outward from this main position, but expression may not be denied the comfort which his unintended authentication of the main position affords. It is true, Professor Clark does not speak of taxonomy, but employs the term

[&]quot;Why is Economies not an Evolutionary Science?" Quarterly Journal of Economics, July, 1898.

^{† &}quot;The Future of Economic Theory," Ibid., October, 1898.

"statics," which is perhaps better suited to his immediate purpose. Nevertheless, in spite of the high authority given the term "statics," in this connection, through its use by Professor Clark and by other writers eminent in the science, it is fairly to be questioned whether the term can legitimately be used to characterize the received economic theories. The word is borrowed from the jargon of physics, where it is used to designate the theory of bodies at rest or of forces in equilibrium. But there is much in the received economic theories to which the analogy of bodies at rest or of forces in equilibrium will not apply. It is perhaps not too much to say that those articles of economic theory that do not lend themselves to this analogy make up the major portion of the received doctrines. So, for instance, it seems scarcely to the point to speak of the statics of production, exchange, consumption, circulation. There are, no doubt, appreciable elements in the theory of these several processes that may fairly be characterized as statical features of the theory; but the doctrines handed down are after all, in the main, theories of the process discussed under each head, and the theory of a process does not belong in statics. The epithet "statical" would, for instance, have to be wrenched somewhat ungently to make it apply to Quesnay's classic Tableau Economique or to the great body of Physiocratic speculations that take their rise from it. The like is true for Books II. and III. of Adam Smith's Wealth of Nations, as also for considerable portions of Ricardo's work, or, to come down to the present generation, for much of Marshall's Principles, and for such a modern discussion as Smart's Studies in Economics, as well as for the fruitful activity of the Austrians and of the later representatives of the Historical School.

But to return from this terminological digression. While economic science in the remoter past of its history has been mainly of a taxonomic character, later

writers of all schools show something of a divergence from the taxonomic line and an inclination to make the science a genetic account of the economic life process, sometimes even without an ulterior view to the taxonomic value of the results obtained. This divergence from the ancient canons of theoretical formulation is to be taken as an episode of the movement that is going forward in latter-day science generally; and the progressive change which thus affects the ideals and the objective point of the modern sciences seems in its turn to be an expression of that matter-of-fact habit of mind which the prosy but exacting exigencies of life in a modern industrial community breed in men exposed to their unmitigated impact.

In speaking of this matter-of-fact character of the modern sciences it has been broadly characterized as "evolutionary"; and the evolutionary method and the evolutionary ideals have been placed in antithesis to the taxonomic methods and ideals of pre-evolutionary days. But the characteristic attitude, aims, and ideals which are so designated here are by no means peculiar to the group of sciences that are professedly occupied with a process of development, taking that term in its most widely accepted meaning. The latter-day inorganic sciences are in this respect like the organic. They occupy themselves with "dynamic" relations and sequences. The question which they ask is always, What takes place next, and why? Given a situation wrought out by the forces under . inquiry, what follows as the consequence of the situation so wrought out? or what follows upon the accession of a further element of force? Even in so non-evolutionary a science as inorganic chemistry the inquiry consistently runs on a process, an active sequence, and the value of the resulting situation as a point of departure for the next step in an interminable cumulative sequence. The last step in the chemist's experimental inquiry into any substance is, What comes of the substance determined? What will it

What will it lead to, when it is made the point of departure in further chemical action? There is no ultimate term, and no definitive solution except in terms of further action. The theory worked out is always a theory of a genetic succession of phenomena, and the relations determined and elaborated into a body of doctrine are always genetic relations. In modern chemistry no cognizance is taken of the honorific bearing of reactions or molecular formulæ. The modern chemist, as contrasted with his ancient congener, knows nothing of the worth, elegance, or cogency of the relations that may subsist between the particles of matter with which he busies himself, for any other than the genetic purpose. spiritual element and the elements of worth and propensity no longer count. Alchemic symbolism and the hierarchical glamour and virtue that once hedged about the nobler and more potent elements and reagents are almost altogether a departed glory of the science. the modest imputation of propensity involved in the construction of a scheme of coercive normality, for the putative guidance of reactions, finds little countenance with the later adepts of chemical science. The science has outlived that phase of its development at which the taxonomic feature was the dominant one.

In the modern sciences, of which chemistry is one, there has been a gradual shifting of the point of view from which the phenomena that the science treats of are apprehended and passed upon; and to the historian of chemical science this shifting of the point of view must be a factor of great weight in the development of chemical knowledge. Something of a like nature is true for economic science; and it is the aim here to present, in outline, some of the successive phases that have passed over the spiritual attitude of the adepts of the science, and to point out the manner in which the transition from one point of view to the next has been made.

As has been suggested in the paper already referred to, the characteristic spiritual attitude or point of view of a given generation or group of economists is shown not so much in their detail work as in their higher syntheses the terms of their definitive formulations—the grounds of their final valuation of the facts handled for purpose of theory. This line of recondite inquiry into the spiritual past and antecedents of the science has not often been pursued seriously or with singleness of purpose, perhaps because it is, after all, of but slight consequence to the practical efficiency of the present-day science. Still, not a little substantial work has been done towards this end by such writers as Hasbach, Oncken, Bonar, Cannan, and Marshall. And much that is to the purpose is also due to writers outside of economics, for the aims of economic speculation have never been insulated from the work going forward in other lines of inquiry. As would necessarily be the case, the point of view of economists has always been in large part the point of view of the enlightened common sense of their time. The spiritual attitude of a given generation of economists is therefore in good part a special outgrowth of the ideals and preconceptions current in the world about them.

So, for instance, it is quite the conventional thing to say that the speculations of the Physiocrats were dominated and shaped by the preconception of Natural Rights. Account has been taken of the effect of natural-rights preconceptions upon the Physiocratic schemes of policy and economic reform, as well as upon the details of their doctrines.* But little has been said of the significance of these preconceptions for the lower courses of the Physiocrats' theoretical structure. And yet that habit of mind to which the natural-rights view is wholesome and adequate is answerable both for the point of departure and

^{*}See, for instance, Hasbach, Allgemeine philosophische Grundlagen der von François Quesnay und Adam Smith begründeten politischen Oekonomie.

for the objective point of the Physiocratic theories, both for the range of facts to which they turned and for the terms in which they were content to formulate their knowledge of the facts which they handled. The failure of their critics to place themselves at the Physiocratic point of view has led to much destructive criticism of their work; whereas, when seen through Physiocratic eyes, such doctrines as those of the net product and of the barrenness of the artisan class appear to be substantially true.

The speculations of the Physiocrats are commonly accounted the first articulate and comprehensive presentation of economic theory that is in line with later theoretical work. The Physiocratic point of view may, therefore, well be taken as the point of departure in an attempt to trace that shifting of aims and norms of procedure that comes into view in the work of later economists when compared with earlier writers.

Physiocratic economics is a theory of the working-out of the Law of Nature (loi naturelle) in its economic bearing, and this Law of Nature is a very simple matter.

Les lois naturelles sont ou physiques ou morales.

On entend ici, par loi physique, le cours réglé de tout événement physique de l'ordre naturel, évidemment le plus avantageux au genre humain.

On entend ici, par loi morale, la règle de toute action humaine de l'ordre morale, conforme à l'ordre physique évidemment le plus avantageux au genre humain.

Ces lois forment ensemble ce qu'on appelle la loi naturelle. Tous les hommes et toutes les puissances humaines doivent être soumis à ces lois souveraines, instituées par l'Être-Suprême: elles sont immuables et irréfragables, et les meilleures lois possible.*

The settled course of material facts tending beneficently to the highest welfare of the human race,—this is the final term in the Physiocratic speculations. This is the touchstone of substantiality. Conformity to these "immutable

^e Quesnay, Droit Naturel, ch. v. (Ed. Daire, Physiocrates, pp. 52-53).

and unerring" laws of nature is the test of economic truth. The laws are immutable and unerring, but that does not mean that they rule the course of events with a blind fatality that admits of no exception and no divergence from the direct line. Human nature may, through infirmity or perversity, wilfully break over the beneficent trend of the laws of nature: but to the Physiocrat's sense of the matter the laws are none the less immutable and irrefragable on that account. They are not empirical generalizations on the course of phenomena, like the law of falling bodies or of the angle of reflection; although many of the details of their action are to be determined only by observation and experience, helped out, of course, by interpretation of the facts of observation under the light of reason. So, for instance, Turgot, in his Réflections, empirically works out a doctrine of the reasonable course of development through which wealth is accumulated and reaches the existing state of unequal distribution; so also his doctrines of interest and of money. The immutable natural laws are rather of the nature of canons of conduct governing nature than generalizations of mechanical sequence, although in a general way the phenomena of mechanical sequence are details of the conduct of nature working according to these canons of conduct. The great law of the order of nature is of the character of a propensity working to an end, to the accomplishment of a purpose. The processes of nature working under the quasi-spiritual stress of this immanent propensity may be characterized as nature's habits of life. Not that nature is conscious of its travail, and knows and desires the worthy end of its endeavors; but for all that there is a quasi-spiritual nexus between antecedent and consequent in the scheme of operation in which nature is engaged. Nature is not uneasy about interruptions of its course or occasional deflections from the direct line through an untoward conjunction of mechanical causes, nor does the validity of

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the great overruling law suffer through such an episode. The introduction of a mere mechanically effective causal factor cannot thwart the course of nature from reaching the goal to which she animistically tends. Nothing can thwart this teleological propensity of nature except counter-activity or divergent activity of a similarly teleological kind. Men can break over the law, and have short-sightedly and wilfully done so; for men are also agents who guide their actions by an end to be achieved. Human conduct is activity of the same kind — on the same plane of spiritual reality or competency — as the course of nature, and it may therefore traverse the latter. The remedy for this short-sighted traffic of misguided human nature is enlightenment,—"instruction publique et privée des lois de l'ordre naturel." *

The nature in terms of which all knowledge of phenomena — for the present purpose economic phenomena - is to be finally synthesized is, therefore, substantially of a quasi-spiritual or animistic character. The laws of nature are in the last resort teleological: they are of the nature of a propensity. The substantial fact in all the sequences of nature is the end to which the sequence naturally tends, not the brute fact of mechanical compulsion or causally effective force. Economic theory is accordingly the theory (1) of how the efficient causes of the ordre naturel work in an orderly unfolding sequence, guided by the underlying natural laws - the propensity immanent in nature to establish the highest well-being of mankind, and (2) of the conditions imposed upon human conduct by these natural laws in order to reach the ordained goal of supreme human welfare. The conditions so imposed on human conduct are as definitive as the laws and the order by force of which they are imposed; and the theoretical conclusions reached, when these laws and this order are known, are therefore expressions

Quesnay, Droit Naturel, ch. v. (Ed. Daire, Physiocrates, p. 53).

of absolute economic truth. Such conclusions are an expression of reality, but not necessarily of fact.

Now, the objective end of this propensity that determines the course of nature is human well-being. But economic speculation has to do with the workings of nature only so far as regards the ordre physique. And the laws of nature in the ordre physique, working through mechanical sequence, can only work out the physical well-being of man, not necessarily the spiritual. This propensity to the physical well-being of man is therefore the law of nature to which economic science must bring its generalizations, and this law of physical beneficence is the substantial ground of economic truth. Wanting this, all our speculations are vain; but having its authentication they are definitive. The great, typical function, to which all the other functioning of nature is incidental if not subsidiary, is accordingly that of the alimentation, nutrition of mankind. In so far, and only in so far as the physical processes contribute to human sustenance and fulness of life, can they, therefore, further the great work Whatever processes contribute to human sustenance by adding to the material available for human assimilation and nutrition, by increasing the substance disposable for human comfort, therefore count towards the substantial end. All other processes, however serviceable in other than this physiological respect, lack the substance of economic reality. Accordingly, human industry is productive, economically speaking, if it heightens the effectiveness of the natural processes out of which the material of human sustenance emerges; otherwise not. The test of productivity, of economic reality in material facts, is the increase of nutritive material. Whatever employment of time or effort does not afford an increase of such material is unproductive, however profitable it may be to the person employed, and however useful or indispensable it may be to the community. The type of such productive industry is the husbandman's employment, which yields a substantial (nutritive) gain. The artisan's work may be useful to the community and profitable to himself, but its economic effect does not extend beyond an alteration of the form in which the material afforded by nature already lies at hand. It is formally productive only, not really productive. It bears no part in the creative or generative work of nature; and therefore it lacks the character of economic substantiality. It does not enhance nature's output of vital force. The artisan's labors, therefore, yield no net product, whereas the husbandman's labors do.

Whatever constitutes a material increment of this output of vital force is wealth, and nothing else is. The theory of value contained in this position has not to do with value according to men's appraisement of the valuable article. Given items of wealth may have assigned to them certain relative values at which they exchange, and these conventional values may differ more or less widely from the natural or intrinsic value of the goods in question; but all that is beside the substantial point. The point in question is not the degree of predilection shown by certain individuals or bodies of men for certain goods. That is a matter of caprice and convention, and it does not directly touch the substantial ground of the economic life. The question of value is a question of the extent to which the given item of wealth forwards the end of nature's unfolding process. It is valuable, intrinsically and really, in so far as it avails the great work which' nature has in hand.

Nature, then, is the final term in the Physiocratic speculations. Nature works by impulse and in an unfolding process, under the stress of a propensity to the accomplishment of a given end. This propensity, taken as the final cause that is operative in any situation, furnishes the basis on which to co-ordinate all our knowledge of those

efficient causes through which Nature works to her ends. For the purpose of economic theory proper, this is the ultimate ground of reality to which our quest of economic truth must penetrate. But back of Nature and her works there is, in the Physiocratic scheme of the universe, the Creator, by whose all-wise and benevolent power the order of nature has been established in all the strength and beauty of its inviolate and immutable perfection. But the Physiocratic conception of the Creator is essentially a deistic one: he stands apart from the course of nature which he has established, and keeps his hands off. In the last resort, of course, "Dieu seul est producteur. Les hommes travaillent, receuillent, économisent, conservent; mais économiser n'est pas produire." * But this last resort does not bring the Creator into economic theory as a fact to be counted with in formulating economic laws. He serves a homiletical purpose in the Physiocratic speculations rather than fills an office essential to the theory. He comes within the purview of the theory by way of authentication rather than as a subject of inquiry or a term in the formulation of economic knowledge. The Physiocratic God can scarcely be said to be an economic fact, but it is otherwise with that nature whose wavs and means constitute the subject-matter of the Physiocratic inquiry.

When this natural system of the Physiocratic speculations is looked at from the side of the psychology of the investigators, or from that of the logical premises employed, it is immediately recognized as essentially animistic. It runs consistently on animistic ground; but it is animism of a high grade,—highly integrated and enlightened, but, after all, retaining very much of that primitive force and naïveté which characterize the animistic explanations of phenomena in vogue among the untroubled bar-

^{*}Dupont de Nemours, Correspondance avec J.-B. Say (Ed. Daire, Physiocrates, première partie, p. 399).

barians. It is not the disjected animism of the vulgar, who see a wilful propensity --- often a wilful perversity --in given objects or situations to work towards a given outcome, good or bad. It is not the gambler's haphazard sense of fortuitous necessity or the housewife's belief in lucky days, numbers or phases of the moon. The Physiocrat's animism rests on a broader outlook, and does not proceed by such an immediately impulsive imputation of propensity. The teleological element—the element of propensity - is conceived in a large way, unified and harmonized, as a comprehensive order of nature as a whole. But it vindicates its standing as a true animism by never becoming fatalistic and never being confused or confounded with the sequence of cause and effect. It has reached the last stage of integration and definition, beyond which the way lies downward from the high, quasi-spiritual ground of animism to the tamer levels of normality and causal uniformities.

There is already discernible a tone of dispassionate and colorless "tendency" about the Physiocratic animism, such as to suggest a wavering towards the side of normality. This is especially visible in such writers as the halfprotestant Turgot. In his discussion of the development of farming, for instance, Turgot speaks almost entirely of human motives and the material conditions under which the growth takes place. There is little metaphysics in it, and that little does not express the law of nature in an adequate form. But, after all has been said, it remains true that the Physiocrat's sense of substantiality is not satisfied until he reaches the animistic ground; and it remains true also that the arguments of their opponents made little impression on the Physiocrats so long as they were directed to other than this animistic ground of their doctrine. This is true in great measure even of Turgot, as witness his controversy with Hume. Whatever criticism is directed against them on other grounds is met

with impatience, as being inconsequential, if not disingenuous.*

To an historian of economic theory the source and the line of derivation whereby this precise form of the orderof-nature preconception reached the Physiocrats are of first-rate importance; but it is scarcely a question to be taken up here,—in part because it is too large a question to be handled here, in part because it has met with adequate treatment at more competent hands, and in part because it is somewhat beside the immediate point under discussion. This point is the logical, or perhaps better the psychological, value of the Physiocrats' preconception, as a factor in shaping their point of view and the terms of their definitive formulation of economic knowledge. For this purpose it may be sufficient to point out that the preconception in question belongs to the generation in which the Physiocrats lived, and that it is the guiding norm of all serious thought that found ready assimilation into the common-sense views of that time. It is the characteristic and controlling feature of what may be called the common-sense metaphysics of the eighteenth century, especially so far as concerns the enlightened French community.

It is to be noted as a point bearing more immediately on the question in hand that this imputation of final causes to the course of phenomena expresses a spiritual attitude which has prevailed, one might almost say, always and everywhere, but which reached its finest, most effective development, and found its most finished expression, in the eighteenth-century metaphysics. It is nothing recondite; for it meets us at every turn, as a matter of course, in the vulgar thinking of to-day,—in the pulpit and in the market place,—although it is not so ingenuous,

^{*} So, for instance, the concluding chapters of La Rivière's Ordre Naturel des Sociétés Politiques.

[†] E.g., Hasbach, loc. cit.; Bonar, Philosophy and Political Economy, Book II.; Ritchie, Natural Rights.

nor does it so unquestionedly hold the primacy in the thinking of any class to-day as it once did. It meets us likewise, with but little change of features, at all past stages of culture, late or early. Indeed, it is the most generic feature of human thinking, so far as regards a theoretical or speculative formulation of knowledge. Accordingly, it seems scarcely necessary to trace the lineage of this characteristic preconception of the era of enlightenment, through specific channels, back to the ancient philosophers or the jurists of the empire. Some of the specific forms of its expression - as, for instance, the doctrine of Natural Rights - are no doubt traceable through mediæval channels to the teachings of the ancients; but there is no need of going over the brook for water, and tracing back to specific teachings the main features of that habit of mind or spiritual attitude of which the doctrines of Natural Rights and the Order of Nature are specific elaborations only. This dominant habit of mind came to the generation of the Physiocrats on the broad ground of group inheritance, not by lineal devolution from any one of the great thinkers of past ages who had thrown its deliverances into a similarly competent form for the use of his own generation.

In leaving the Physiocratic discipline and the immediate sphere of Physiocratic influence for British ground, we are met by the figure of Hume. Here, also, it will be impracticable to go into details as to the remoter line of derivation of the specific point of view that we come upon on making the transition, for reasons similar to those already given as excuse for passing over the similar question with regard to the Physiocratic point of view. Hume is, of course, not primarily an economist; but that placid unbeliever is none the less a large item in any inventory of eighteenth-century economic thought. Hume was not gifted with a facile acceptance of the group inheritance

that made the habit of mind of his generation. Indeed, he was gifted with an alert, though somewhat histrionic, scepticism touching everything that was well received. It is his office to prove all things, though not necessarily to hold fast that which is good.

Aside from the strain of affectation discernible in Hume's scepticism, he may be taken as an accentuated expression of that characteristic bent which distinguishes British thinking in his time from the thinking of the Continent, and more particularly of the French. There is in Hume, and in the British community, an insistence on the prosy, not to say the seamy, side of human affairs. He is not content with formu ating his knowledge of things in terms of what ought to be or in terms of the objective point of the course of things. He is not even content with adding to the teleological account of phenomena a chain of empirical, narrative generalizations as to the usual course of things. He insists, in season and out of season, on an exhibition of the efficient causes engaged in any sequence of phenomena; and he is sceptical - irreverently sceptical — as to the need or the use of any formulation of knowledge that outruns the reach of his own matter-of-fact, step-by-step argument from cause to effect.

In short, he is too modern to be wholly intelligible to those of his contemporaries who are most neatly abreast of their time. He out-Britishes the British; and, in his footsore quest for a perfectly tame explanation of things, he finds little comfort, and indeed scant courtesy, at the hands of his own generation. He is not in sufficiently naïve accord with the range of preconceptions then in vogue.

But, while Hume may be an accentuated expression of a national characteristic, he is not therefore an untrue expression of this phase of British eighteenth-century thinking. The peculiarity of point of view and of method for which he stands has sometimes been called the critical attitude, sometimes the inductive method, sometimes the materialistic or mechanical, and again, though less aptly, the historical method. Its characteristic is an insistence on matter of fact.

This matter-of-fact animus that meets any historian of economic doctrine on his introduction to British economics is a large, but not the largest, feature of the British scheme of early economic thought. It strikes the attention because it stands in contrast with the relative absence of this feature in the contemporary speculations of the Continent. The most potent, most formative habit of thought concerned in the early development of economic teaching on British ground is best seen in the broader generalizations of Adam Smith, and this more potent factor in Smith is a bent that is substantially identical with that which gives consistency to the speculations of the Physiocrats. In Adam Smith the two are happily combined, not to say blended; but the animistic habit still holds the primacy, with the matter-of-fact as a subsidiary though powerful factor. He is said to have combined deduction with induction. The relatively great prominence given the latter marks the line of divergence of British from French economics, not the line of coincidence; and on this account it may not be out of place to look more narrowly into the circumstances to which the emergence of this relatively greater penchant for a matterof-fact explanation of things in the British community is due.

To explain the characteristic animus for which Hume stands on grounds that might appeal to Hume, we should have to inquire into the peculiar circumstances—ultimately material circumstances—that have gone to shape the habitual view of things within the British community, and that so have acted to differentiate the British preconceptions from the French, or from the general range of preconceptions prevalent on the Continent. These pecul-

iar formative circumstances are no doubt to some extent racial peculiarities; but the racial complexion of the British community is not widely different from the French, and especially not widely different from certain other Continental communities which are for the present purpose roughly classed with the French. Race difference can therefore not wholly, nor indeed for the greater part, account for the cultural difference of which this difference in preconceptions is an outcome. Through its cumulative effect on institutions the race difference must be held to have had a considerable effect on the habit of mind of the community: but, if the race difference is in this way taken as the remoter ground of an institutional peculiarity, which in its turn has shaped prevalent habits of thought, then the attention may be directed to the proximate causes, the concrete circumstances, through which this race difference has acted, in conjunction with other ulterior circumstances, to work out the psychological phenomena Race differences, it may be remarked, do not so nearly coincide with national lines of demarcation as differences in the point of view from which things are habitually apprehended or differences in the standards according to which facts are rated.

If the element of race difference be not allowed definitive weight in discussing national peculiarities that underlie the deliverances of common sense, neither can these national peculiarities be confidently traced to a national difference in the transmitted learning that enters into the common-sense view of things. So far as concerns the concrete facts embodied in the learning of the various nations within the European culture, these nations make up but a single community. What divergence is visible does not touch the character of the positive information with which the learning of the various nations is occupied. Divergence is visible in the higher syntheses, the methods of handling the material of knowledge, the basis of valua-

tion of the facts taken up, rather than in the material of knowledge. But this divergence must be set down to a cultural difference, a difference of point of view, not to a difference in inherited information. When a given body of information passes the national frontiers it acquires a new complexion, a new national, cultural physiognomy. It is this cultural physiognomy of learning that is here under inquiry, and a comparison of early French economics (the Physiocrats) with early British economics (Adam Smith) is here entered upon merely with a view to making out what significance this cultural physiognomy of the science has for the past progress of economic speculation.

The broad features of economic speculation, as it stood at the period under consideration, may be briefly summed up, disregarding the element of policy, or expediency, which is common to both groups of economists, and attending to their theoretical work alone. With the Physiocrats, as with Adam Smith, there are two main points of view from which economic phenomena are treated: (a) the matter-of-fact point of view or preconception, which yields a discussion of causal sequences and correlations; and (b) what, for want of a more expressive word, is here called the animistic point of view or preconception, which yields a discussion of teleological sequences and correlations,—a discussion of the function of this and that "organ," of the legitimacy of this or the other range of facts. The former preconception is allowed a larger scope in the British than in the French economics: there is more of "induction" in the British. The latter preconception is present in both, and is the definitive element in both; but the animistic element is more colorless in the British, it is less constantly in evidence, and less able to stand alone without the support of arguments from cause to effect. Still, the animistic element is the controlling factor in the higher syntheses of both; and for both alike it affords the definitive ground on which the argument finally comes to rest. In neither group of thinkers is the sense of substantiality appeared until this quasi-spiritual ground, given by the natural propensity of the course of events, is reached. But the propensity in events, the natural or normal course of things, as appealed to by the British speculators, suggests less of an imputation of will-power, or personal force, to the propensity in question. It may be added, as has already been said in another place, that the tacit imputation of will-power or spiritual consistency to the natural or normal course of events has progressively weakened in the later course of economic speculation, so that in this respect, the British economists of the eighteenth century may be said to represent a later phase of economic inquiry than the Physiocrats.

Unfortunately, but unavoidably, if this question as to the cultural shifting of the point of view in economic science is taken up from the side of the causes to which the shifting is traceable, it will take the discussion back to ground on which an economist must at best feel himself to be but a raw layman, with all a layman's limitations and ineptitude, and with the certainty of doing badly what might be done well by more competent hands. But, with a reliance on charity where charity is most needed, it is necessary to recite summarily what seems to be the psychological bearing of certain cultural facts.

A cursory acquaintance with any of the more archaic phases of human culture enforces the recognition of this fact,—that the habit of construing the phenomena of the inanimate world in animistic terms prevails pretty much universally on these lower levels. Inanimate phenomena are apprehended to work out a propensity to an end: the movements of the elements are construed in terms of quasipersonal force. So much is well authenticated by the observations on which anthropologists and ethnologists draw

for their materials. This animistic habit, it may be said, seems to be more effectual and far-reaching among those primitive communities that lead a predatory life.

But along with this feature of archaic methods of thought or of knowledge, the picturesqueness of which has drawn the attention of all observers, there goes a second feature, no less important for the purpose in hand, though less obtrusive. The latter is of less interest to the men who have to do with the theory of cultural development, because it is a matter of course. This second feature of archaic thought is the habit of also apprehending facts in non-animistic, or impersonal, terms. The imputation of propensity in no case extends to all the mechanical facts in the case. There is always a substratum of matter of fact, which is the outcome of an habitual imputation of causal sequence, or, perhaps better, an imputation of mechanical continuity, if a new term be permitted. The agent, thing, fact, event, or phenomenon, to which propensity, will-power, or purpose, is imputed, is always apprehended to act in an environment which is accepted as spiritually inert. There are always opaque facts as well as self-directing agents. agent acts through means which lend themselves to his use on other grounds than that of spiritual compulsion. although spiritual compulsion may be a large feature in any given case.

The same features of human thinking, the same two complementary methods of correlating facts and handling them for the purposes of knowledge, are similarly in constant evidence in the daily life of men in our own community. The question is, in great part, which of the two bears the greater part in shaping human knowledge at any given time and within any given range of knowledge or of facts.

Other features of the growth of knowledge, which are remoter from the point under inquiry, may be of no less

consequence to a comprehensive theory of the development of culture and of thought; but it is of course out of the question here to go farther afield. The present inquiry will have enough to do with these two. No other features are correlative with these, and these merit discussion on account of their intimate bearing on the point of view of economics. The point of interest with respect to these two correlative and complementary habits of thought is the question of how they have fared under the changing exigencies of human culture; in what manner they come, under given cultural circumstances, to share the field of knowledge between them; what is the relative part of each in the composite point of view in which the two habits of thought express themselves at any given cultural stage.

The animistic preconception enforces the apprehension of phenomena in terms generically identical with the terms of personality or individuality. As a certain modern group of psychologists would say, it imputes to objects and sequences an element of habit and attention similar in kind, though not necessarily in degree, to the like spiritual attitude present in the activities of a personal agent. The matter-of-fact preconception, on the other hand, enforces a handling of facts without imputation of personal force or attention, but with an imputation of mechanical continuity, substantially the preconception which has reached a formulation at the hands of scientists under the name of conservation of energy or persistence of quantity. Some appreciable resort to the latter method of knowledge is unavoidable at any cultural stage, for it is indispensable to all industrial efficiency. All technological processes and all mechanical contrivances rest, psychologically speaking, on this ground. This habit of thought is a selectively necessary consequence of industrial life, and, indeed, of all human experience in making use of the material means of life. It should therefore follow that, in

a general way, the higher the culture, the greater the share of the mechanical preconception in shaping human thought and knowledge, since, in a general way, the stage of culture attained depends on the efficiency of industry. The rule, while it does not hold with anything like extreme generality, must be admitted to hold to a good extent; and to that extent it should hold also that, by a selective adaptation of men's habits of thought to the exigencies of those cultural phases that have actually supervened, the mechanical method of knowledge should have gained in scope and range. Something of the sort is borne out by observation.

A further consideration enforces the like view. As the community increases in size, the range of observation of the individuals in the community also increases; and continually wider and more far-reaching sequences of a mechanical kind have to be taken account of. to adapt their own motives to industrial processes that are not safely to be construed in terms of propensity, predilection, or passion. Life in an advanced industrial community does not tolerate a neglect of mechanical fact; for the mechanical sequences through which men, at an appreciable degree of culture, work out their livelihood, are no respecters of persons or of will-power. Still, on all but the higher industrial stages, the coercive discipline of industrial life, and of the scheme of life that inculcates regard for the mechanical facts of industry, is greatly mitigated by the largely haphazard character of industry, and by the great extent to which man continues to be the prime mover in industry. So long as industrial efficiency is chiefly a matter of the handicraftsman's skill, dexterity, and diligence, the attention of men in looking to the industrial process is met by the figure of the workman, as the chief and characteristic factor; and thereby it comes to run on the personal element in industry.

But, with or without mitigation, the scheme of life

which men perforce adopt under the exigencies of an advanced industrial situation shapes their habits of thought on the side of their behavior, and thereby shapes their habits of thought to some extent for all purposes. Each individual is but a single complex of habits of thought, and the same psychical mechanism that expresses itself in one direction as conduct expresses itself in another direction as knowledge. The habits of thought formed in the one connection, in response to stimuli that call for a response in terms of conduct, must, therefore, have their effect when the same individual comes to respond to stimuli that call for a response in terms of knowledge. The scheme of thought or of knowledge is in good part a reverberation of the scheme of life. So that, after all has been said, it remains true that with the growth of industrial organization and efficiency there must, by selection and by adaptation, supervene a greater resort to the mechanical or dispassionate method of apprehending facts.

But the industrial side of life is not the whole of it, nor does the scheme of life in vogue in any community or at any cultural stage comprise industrial conduct alone. The social, civic, military, and religious interests come in for their share of attention, and between them they commonly take up by far the larger share of it. Especially is this true so far as concerns those classes among whom we commonly look for a cultivation of knowledge for knowledge's sake. The discipline which these several interests exert does not commonly coincide with the training given by industry. So the religious interest, with its canons of truth and of right living, runs exclusively on personal relations and the adaptation of conduct to the predilections of a superior personal agent. The weight of its discipline, therefore, falls wholly on the animistic side. It acts to heighten our appreciation of the spiritual bearing of phenomena and to discountenance a matter-of-fact apprehension of things. The sceptic of the type of Hume has never been in good repute with those who stand closest to the accepted religious truths. The bearing of this side of our culture upon the development of economics is shown by what the mediæval scholars had to say on economic topics.

The disciplinary effects of other phases of life, outside of the industrial and the religious, is not so simple a matter; but the discussion here approaches nearer to the point of immediate inquiry,—namely, the cultural situation in the eighteenth century, and its relation to economic speculation,—and this ground of interest in the question may help to relieve the topic of the tedium that of right belongs to it.

In the remoter past of which we have records, and even in the more recent past, Occidental man, as well as man elsewhere, has eminently been a respecter of persons. Wherever the warlike activity has been a large feature of the community's life, much of human conduct in society has proceeded on a regard for personal force. The scheme of life has been a scheme of personal aggression and subservience, partly in the naïve form, partly conventionalized in a system of status. The discipline of social life for the present purpose, in so far as its canons of conduct rest on this element of personal force in the unconventionalized form, plainly tends to the formation of a habit of apprehending and co-ordinating facts from the animistic point of view. So far as we have to do with life under a system of status, the like remains true, but with a differ-The régime of status inculcates an unremitting and very nice discrimination and observance of distinctions of personal superiority and inferiority. To the criterion of personal force, or will-power, taken in its immediate bearing on conduct, is added the criterion of personal excellence-in-general, regardless of the first-hand potency of the given person as an agent. This criterion of conduct re-

quires a constant and painstaking imputation of personal value, regardless of fact. The discrimination enjoined by the canons of status proceeds on an invidious comparison of persons in respect of worth, value, potency, virtue, which must, for the present purpose, be taken as putative. The greater or less personal value assigned a given individual or a given class under the canons of status is not assigned on the ground of visible efficiency, but on the ground of a dogmatic allegation accepted on the strength of an uncontradicted categorical affirmation simply. canons of status hold their ground by force of pre-emption. Where distinctions of status are based on a putative worth transmitted by descent from honorable antecedents. the sequence of transmission to which appeal is taken as the arbiter of honor is of a putative and animistic character rather than a visible mechanical continuity. habit of accepting as final what is prescriptively right in the affairs of life has as its reflex in the affairs of knowledge the formula, Quid ab omnibus, quid ubique creditur credendum est.

Even this meagre account of the scheme of life that characterizes a régime of status should serve to indicate what is its disciplinary effect in shaping habits of thought, and therefore in shaping the habitual criteria of knowledge and of reality. A culture whose institutions are a framework of invidious comparisons implies, or rather involves and comprises, a scheme of knowledge whose definitive standards of truth and substantiality are of an animistic character; and, the more undividedly the canons of status and ceremonial honor govern the conduct of the community, the greater the facility with which the sequence of cause and effect is made to yield before the higher claims of a spiritual sequence or guidance in the course of events. Men consistently trained to an unremitting discrimination of honor, worth, and personal force in their daily conduct, and to whom these criteria

afford the definitive ground of sufficiency in co-ordinating facts for the purposes of life, will not be satisfied to fall short of the like definitive ground of sufficiency when they come to co-ordinate facts for the purposes of knowledge simply. The habits formed in unfolding his activity in one direction, under the impulse of a given interest, assert themselves when the individual comes to unfold his activity in any other direction, under the impulse of any other interest. If his last resort and highest criterion of truth in conduct is afforded by the element of personal force and invidious comparison, his sense of substantiality or truth in the quest of knowledge will be satisfied only when a like definitive ground of animistic force and invidious comparison is reached. But when such ground is reached he rests content and pushes the inquiry no farther. In his practical life he has acquired the habit of resting his case on an authentic deliverance as to what is absolutely right. This absolutely right and good final term in conduct has the character of finality only when conduct is construed in a ceremonial sense; that is to say, only when life is conceived as a scheme of conformity to a purpose outside and beyond the process of living. Under the régime of status this ceremonial finality is found in the concept of worth or honor. In the religious domain it is the concept of virtue, sanctity, or tabu. Merit lies in what one is, not in what one does. The habit of appeal to ceremonial finality, formed in the school of status, goes with the individual in his quest of knowledge, as a dependence upon a similarly authentic norm of absolute truth,—a similar seeking of a final term outside and beyond the range of knowledge.

The discipline of social and civic life under a régime of status, then, re-enforces the discipline of the religious life; and the outcome of the resulting habituation is that the canons of knowledge are cast in the animistic mould and converge to a ground of absolute truth, and this absolute

truth is of a ceremonial nature. Its subject-matter is a reality regardless of fact.

The outcome, for science, of the religious and social life of the civilization of status, in Occidental culture, was a structure of quasi-spiritual appreciations and explanations. of which astrology, alchemy, and mediæval theology and metaphysics are competent, though somewhat one-sided. Throughout the range of this early learning the ground of correlation of phenomena is in part the supposed relative potency of the facts correlated; but it is also in part a scheme of status, in which facts are scheduled according to a hierarchical gradation of worth or merit, having only a ceremonial relation to the observed phenomena. Some elements (some metals, for instance) are noble, others base; some planets, on grounds of ceremonial efficacy, have a sinister influence, others a beneficent one; and it is a matter of serious consequence whether they are in the ascendant, and so on.

The body of learning through which the discipline of animism and invidious comparison transmitted its effects to the science of economics was what is known as natural theology, natural rights, moral philosophy, and natural law. These several disciplines or bodies of knowledge had wandered far from the naïve animistic standpoint at the time when economic science emerged, and much the same is true as regards the time of the emergence of other modern sciences. But the discipline which makes for an animistic formulation of knowledge continued to hold the primacy in modern culture, although its dominion was never altogether undivided or unmitigated. Occidental culture has long been largely an industrial culture; and, as already pointed out, the discipline of industry, and of life in an industrial community, does not favor the animistic preconception. This is especially true as regards industry which makes large use of mechanical contrivances. The difference in these respects between Occidental industry and science, on the one hand, and the industry and science of other cultural regions, on the other hand, is worth noting in this connection. The result has been that the sciences, as that word is understood in later usage, have come forward gradually, and in a certain rough parallelism with the development of industrial processes and industrial organization. It is possible to hold that both modern industry (of the mechanical sort) and modern science centre about the region of the North Sea. It is still more palpably true that within this general area the sciences, in the recent past, show a family likeness to the civil and social institutions of the communities in which they have been cultivated, this being true to the greatest extent of the higher or speculative sciences; that is, in that range of knowledge in which the animistic preconception can chiefly and most effectively find application. There is, for instance, in the eighteenth century a perceptible parallelism between the divergent character of British and Continental culture and institutions, on the one hand, and the dissimilar aims of British and Continental speculation, on the other hand.

Something has already been said of the difference in preconceptions between the French and the British economists of the eighteenth century. It remains to point out the correlative cultural difference between the two communities, to which it is conceived that the difference in scientific animus is in great measure due. It is, of course, only the general features, the general attitude of the speculators, that can be credited to the difference in culture. Differences of detail in the specific doctrines held could be explained only on a much more detailed analysis than can be entered on here, and after taking account of facts which cannot here be even allowed for in detail.

Aside from the greater resort to mechanical contrivances and the larger scale of organization in British industry, the further cultural peculiarities of the British community

run in the same general direction. British religious life and beliefs had less of the element of fealty - personal or discretionary mastery and subservience - and more of a tone of fatalism. The civil institutions of the British had not the same rich personal content as those of the French. The British subject owned allegiance to an impersonal law rather than to the person of a superior. Relatively, it may be said that the sense of status, as a coercive factor. was in abevance in the British community. Even in the warlike enterprise of the British community a similar characteristic is traceable. Warfare is, of course, a matter of personal assertion. Warlike communities and classes are necessarily given to construing facts in terms of personal force and personal ends. They are always superstitious. They are great sticklers for rank and precedent. and zealously cultivate those distinctions and ceremonial observances in which a system of status expresses itself. But, while warlike enterprise has by no means been absent from the British scheme of life, the geographical and strategic isolation of the British community has given a characteristic turn to their military relations. In recent times British warlike operations have been conducted abroad. The military class has consequently in great measure been segregated out from the body of the community, and the ideals and prejudices of the class have not been transfused through the general body with the same facility and effect that they might otherwise have had. The British community at home has seen the campaign in great part from the standpoint of the "sinews of war."

The outcome of all these national peculiarities of circumstance and culture has been that a different scheme of life has been current in the British community from what has prevailed on the Continent. There has resulted the formation of a different body of habits of thought and a different animus in their handling of facts. The preconception of causal sequence has been allowed larger scope

in the correlation of facts for purposes of knowledge; and, where the animistic preconception has been resorted to, as it always has in the profounder reaches of learning, it has commonly been an animism of a tamer kind.

Taking Adam Smith as an exponent of this British attitude in theoretical knowledge, it is to be noted that, while he formulates his knowledge in terms of a propensity (natural laws) working teleologically to an end, the end or objective point which controls the formulation has not the same rich content of vital human interest or advantage as is met with in the Physiocratic speculations. There is perceptibly less of an imperious tone in Adam Smith's natural laws than in those of the contemporary French economists. It is true, he sums up the institutions with which he deals in terms of the ends which they should subserve, rather than in terms of the exigencies and habits of life out of which they have arisen; but he does not with the same tone of finality appeal to the end subserved as a final cause through whose coercive guidance the complex of phenomena is kept to its appointed task. Under his hands the restraining, compelling agency retires farther into the background, and appeal is taken to it neither so directly nor on so slight provocation.

But Adam Smith is too large a figure to be disposed of in a couple of concluding paragraphs. At the same time his work and the bent which he gave to economic speculation are so intimately bound up with the aims and bias that characterize economics in its next stage of development that he is best dealt with as the point of departure for the Classical School rather than merely as a British counterpart of Physiocracy. Adam Smith will accordingly be considered in immediate connection with the bias of the classical school and the incursion of utilitarianism into economics.

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A COLLECTIVIST PHILOSOPHY OF TRADE UNIONISM.

By general consent, England is conceded to be the country which, at present, has most to teach the world in regard to the new democratic developments in industrial self-control. Here the growth of labor organizations has been most serious, consecutive, and persistent. Here the workmen's associated demand for participation and recognition in the conduct of industrial business has received most cordial and discriminating support from public opinion and legislative enactment. Here the voluntary associations of workers have shown more genuine capacity for business-like conduct of their own affairs and for intelligent recognition of those social duties and obligations which are the forgotten complement of the rights and privileges of voluntary organization. Doubtless it is this circumstance which has made English workmen and their industrial condition the subject of such innumerable investigations and dissertations by distinguished and undistinguished authors, native and foreign, representing every degree of intelligence and capacity and every phase of prejudice and opinion. Of the making of books on the subject of English Trade Unions and the allied problems of modern industry there is indeed no end. And at a time when the deeper current of thought is more than ever hidden by the froth and foam of speculation and agitation, when the true trend of events is concealed rather than revealed by the vast detritus of aimless investigation and compilation, public and private, official and nonofficial, a clear and comprehensive retrospective and constructive analysis is supremely welcome. Such an historical and critical survey of English Trade Unionism and allied phases of industrial organization the student now has before him in a clearly related series of formidable volumes from Sidney and Beatrice Webb. The first volume, devoted to the narrative History of Trade Unionism in England, appeared in 1894, and is already familiar. Two volumes on Industrial Democracy, devoted to a critical and constructive examination of trade union structure, function, and theory, bear the date 1898. A residual volume of fragmentary essays, entitled the Problems of Modern Industry, not included in the series proper, affords a concise statement of some of the propagandist prepossessions which affect the authors' general point of view. Taken together, the three main volumes constitute an ambitious sociological treatise on the history and philosophy of the English trade union movement.

Happily, this most recent contribution to the well-worn theme has other claims upon the student's attention than that of novelty and size. It is the fruit of exceptional capacity, excellent opportunity, great industry, enlightened sympathy, and propagandist zeal, joined to undoubted reverence for scientific method and a high degree of scholarly attainment. No one who has followed these voluminous studies has for a moment doubted the originality or the significance of the work. In point of mere quantity it is no mean achievement, though in this respect the treatises merit the equivocal approbation conveved in the phrase, "a mine of information," especially in view of the rich mass of historical "pay dirt" from which the ore is slowly and patiently washed before the reader's very eyes. And, interesting as this process of semi-controversial placer-mining is, even the appreciative reader often wishes he could have the scattered grains of truth assayed and melted down and stored in smaller volume, or coined in some convenient form for current use.

The general plan of the work is easy to outline, but difficult to keep in view through all the wealth of subdivision and detail. According to the biological formula of the authors, the earlier volume on the History of Trade Unionism is to be regarded simply as the natural history of the subject,—a picture of "the outward form and habit of the creature" manifest in its political and industrial characteristics, past and present; while Industrial Democracy is a three-part analysis of internal characteristics, following the grand divisions of Trade Union Structure, Trade Union Function, and Trade Union Theory.

The conception of vital and organic unity implied in this biological classification of the phenomena discussed is no mere accident of phrase. On the contrary, it is only one aspect of a fundamental scientific faith in the essential unity and the mutual relevance of political, industrial, and social phenomena. For it is the distinctive feature of the threefold analysis in Industrial Democracy that it aims to furnish not only what we have styled a philosophy of Trade Unionism, but incidentally a philosophy of social and industrial organization as well. This is the dominant characteristic of the treatise. It is this which differentiates it from conventional studies, and gives it peculiar interest as an application of broad sociological methods to the examination of seemingly isolated phenomena. Earlier writers have been content to describe Trade Unionism simply as a phase of industrial organization. Here it is treated as a permanent and integral phase of social evolution, rich in lessons for the student of political institutions, of economic theory, and of social ideals.

The fundamental theses of the new sociological philosophy of Trade Unionism, which clearly reveal this scientific faith, are essentially threefold, and may be roughly summarized in three groups, corresponding to the three main divisions of the treatise,—Structure, Function, and Theory. First, it is urged that Trade Unionism is a typical and spontaneous manifestation of the methods and results of pure democracy,—a crucial experiment in

self-government; a microcosm reproducing the experience of political democracy in the past and prophetic of the phases through which political democracies will pass in time to come. Second, that the essence of Trade Unionism is a concerted effort to substitute the true compulsory freedom of "collective bargaining" for the illusory liberty of individual contract and competitive inequality, which "invariably tends, for the mass of workers, towards the worst possible conditions of labor — ultimately, indeed, to the barest subsistence level"; that it is a united effort to lift from the isolated workman the crushing and degrading weight of that long "chain of bargainings" inevitably forged by "the anarchic irresponsibility of the private customer" and the competitive "system of natural liberty"; that it is a legitimate insistence on the right of the wage-earner to a progressive participation in the fruits of industrial civilization, and an indispensable protection to his standard of life. Third, that Trade Unionism is a permanent, and not a transitory, feature of democratic society, destined to endure under any possible form of industrial organization consistent with a democratic state: that it rests not merely upon a sound basis of economic theory, but is inherent in human nature; that it is, therefore, not an artificial contrivance, but a natural and instinctive manifestation of industrial psychology, and in its contemporary aspects simply a conscious evolution of what was first unconsciously involved.

The bare statement of these views is sufficient answer to the preliminary objection that the ambitious title Industrial Democracy has no more applicability to an analysis of trade union practices, principles, and implications than it would have to a similar study of the co-operative movement or of Friendly Societies. Doubtless the splendid achievements of the English co-operators admirably exemplify democratic self-control in industrial affairs, and it is no less certain that the elaborate self-help organiza-

tion of English Friendly Societies clearly illustrates the general principles of democratic administration. But he would be a bold champion who should claim for these movements that enduring combination of political, industrial, and psychological significance ascribed to Trade Unionism; not to mention the added defect that they are probably less typical than Trade Unions are of that alleged democracy of the future, which is here regarded as democracy par excellence, the democracy of the hired man.

Moreover, with these general theses (and hypotheses) in mind, the arrangement and sequence of the treatise more readily explains itself. The analysis of Trade Union Structure, in Part I., indicates with comparative brevity the kind of electoral machinery which trade unions have gradually developed in their efforts to cope with the universal democratic problem of combining administrative efficiency and popular control,—the successive phases through which these typical industrial democracies have passed, and the lessons which their isolated experiments bequeath to political democracy and society at large. The discussion of Trade Union Function, in Part II., is an exhaustive, four-hundred-and-fifty-page account of what Trade Unionism really is in practice, of the ends it has in view and the means adopted to attain these ends, of the assumptions upon which it proceeds and the general principles involved in its rules and regulations. Finally, the discussion of Trade Union Theory, in Part III., is a critical examination of the theoretical wisdom and practical expediency of all these phases of trade union policy,-vindicating Trade Unionism against the criticisms of "obsessed" orthodox economists, planting it on the firm foundation of sound theory, practical experience, and human nature, and concluding with an apocalyptic vision of the democratic future, when compulsory trade unionship and compulsory citizenship shall be coextensive with the Collectivist State.

Turn now to the lessons which this searching investigation of Trade Union Structure reveals to the student of democracy. Those who are simply concerned with the practical value and efficiency of trade unions are warned that this part of the book has little interest for them. the other hand, the student of democracy is assured that the literature of cash accounts, monthly and yearly reports, pamphlets, and trade documents, "poured out to the extent of hundreds of volumes annually -is of fascinating interest," because "it lays bare, more completely than any records known to us, the real nature and action of democratic organization in the Anglo-Saxon race." Those who view with apprehension the participation of manual working wage-earners in modern politics can here reassure themselves by a study of thousands of typical and untrammelled working class democracies, illustrating the manner in which the workingman copes with the problem of combining administrative efficiency with popular control. And, obviously, if we assume "that the manual workers, who number four-fifths of the population, will gradually become the dominant influences in the electorate, and will contribute an important and increasing section of the representatives, the governing assemblies of the Coal-miners or Cotton Operatives to-day may be to a large extent prophetic of the future legislative assembly in any English-speaking community."

Granting for the moment the validity of thus reasoning from the conduct of a voluntary trade organization to the conduct of a nation, what light has this investigation thrown on the political instincts of that small and select minority of English workingmen who have constituted the trade union movement? What prophetic forecast does the workingman's "industrial statesmanship" give of the future of a workingman's political democracy? In short, what lesson does government of the workman, by the workman, for the workman, bring to government of the people, by the people, for the people?

It would be difficult to exaggerate the faithful enthusiasm with which the answer to these questions is sought. Beginning with an ambitious comparison of the local trade clubs of the eighteenth century to the general meetings of the Swiss cantons of Uri and Appenzell, there is throughout the whole discussion a persistent and ingenious effort to use the language of political analogy, and thus lift into significance the most commonplace details of trade union methods of election, representation, and ad-The gradual evolution of administration ministration. and control is traced through the slow and painful process of experiment, failure, and survival of the fit, all the way from the rudimentary aspects of a pothouse democracy, chiefly concerned in securing equality of drinks and rotation in the office of president ("accommodated with his own choice of liquors, wine only excepted"), to the constitutional perfection of such "a fully equipped democratic state of the modern type" as the Amalgamated Association of Operative Cotton-spinners. The lessons of a whole century of painful and incessant experiment, the results of this "long and inarticulate struggle of unlettered men," are summarized in a single word. "If, therefore, democracy means that everything which 'concerns all should be decided by all,' and that each citizen should enjoy an equal and identical share in the government. Trade Union history indicates clearly the inevitable result. Government by such contrivances as Rotation of Office, the Mass Meeting, the Referendum and Initiative, or the Delegate restricted by his Imperative Mandate, leads straight either to inefficiency and disintegration or to the uncontrolled dominance of a personal dictator or an expert bureaucracy. Dimly and almost unconsciously, this conclusion has, after a whole century of experiment, forced itself upon the more advanced trades. The old theory of democracy is still an article of faith, and constantly comes to the front when any organization has to be formed for

brand-new purposes; but Trade Union constitutions have undergone a silent revolution."

But this is only the negative side of the conclusion. Trade union experience points with no less clearness to the positive necessity of replacing these naïve, crude, and obsolete methods of undeveloped democracy by a new type of representative assembly, composed of "experts" or "professional representatives," such as we already find in the recently developed and prophetic "parliaments" of cotton-spinners and coalminers. Trade union history. therefore, points to "government by a Representative Assembly as the last word of democracy." But, if the Cotton Parliament is really prophetic, we are assured that the typical English-speaking representative assembly of the progressive future will advance as much beyond the existing House of Commons and other such adventitious aggregates as such legislative bodies have advanced beyond a mere delegate meeting. For the "expert" or "professional representative" will resemble neither the irresponsible middle-class parliamentary representative of to-day nor the instructed delegate of the primitive trade union as-He will be the paid expert adviser, counsellor, and persuader of his constituents, and, even when advice and counsel are rejected, the holder of his constituents' brief and the exponent of their views.

As already intimated, the nearest approximations to these ideals of representative government are found in the two great modern federal associations of coalminers and cotton operatives, comprising one-fifth of the total trade union membership and pre-eminent in point of numbers, political influence, and annual income. Both these trades have solved the fundamental problem of administrative efficiency and popular control by the combination of an expert civil service and representative institutions. The Amalgamated Association of Cotton-spinners is free from all those naïve and obsolete expedients of popular

control which older unions so tardily and reluctantly abandon, such as the general or aggregate meeting, the referendum and the initiative, rotation of office, the instructed delegate. On the other hand, it has an elected parliament, supreme and uncontrolled, a cabinet appointed by and responsible only to that parliament, a chief executive officer chosen for his efficiency and enjoying civil service permanence of tenure. The Miners' Parliament, similarly constituted, and representing about two-thirds the organized coalminers, is likewise characterized as "in many respects the most important assembly in the Trade Union world." But, after all, it must be remembered that these conclusions are, for the mass of the trade union world, merely an insinuation of advice and encouragement in the name of scientific generalization and prophecy, rather than a record of actual progress. For at bottom there is still recognized an "unconscious exasperation of the wage-earners all over the world against representative institutions," due to the tendency of the specialized representative (who becomes a brain worker) to get out of touch with his constituents. And, even in these model "parliaments" of the cotton-spinners and the coalminers, this difficulty and distrust has led to the combination of two classes of representatives, the salaried officials of the districts and the workmen still employed at the mill or in the mine.

As to the proper unit of self-government and the vexed question of the proper division of the powers between central and local authorities, it is frankly admitted that "Trade Union experience affords no guide, either to other voluntary associations or to political democracy." From the point of view of the trade union, however, the problem would seem simple enough, given the proposition that "the desire for uniform minimum conditions throughout each industry" is, "whether wisely or not, the most permanent of Trade Union aspirations." It follows obviously

that such uniformity of minimum throughout a trade can only be enforced by an organization coextensive with the trade. Both theory and practice, therefore, point to "the whole extent of each trade within the British Isles as forming the proper unit of government for any combination of the wage-earners in that trade." The same line of reasoning would lead to the conclusion that a militant organization for the enforcement of a uniform minimum would have to accept the inevitable centralization of funds and of executive administration which is the universal price paid for militant efficiency. So that some amalgamated form of national trade organization would seem to be a logical necessity. This is doubtless a sufficient explanation of the tendency of workingmen to break with their democratic traditions, and adopt a centralized and bureaucratic system of administration in their trade unions, in marked contrast to their jealous insistence upon local autonomy in the administration of the great Friendly Society and co-operative movements. In reality, however, trade unions have been more influenced by fact than by theory, and have expanded their aims and organizations to meet the constantly expanding area of effective competition, due to the constantly increasing mobility of labor throughout the length and breadth of a trade or of closely allied trades. Broad views of trade solidarity, a propagandist enthusiasm, and a missionary zeal for the uniform minimum are fruits of the wage-earner's somewhat peculiar economic necessity of helping competitors as a condition of helping himself. Slowly and reluctantly, in spite of selfish and often exclusive aims, in spite of race prejudices, and in spite of jealousy in regard to local and sectional autonomy, the unit of organization has been expanding from the town to the trade. Unhappily, in spite of some approximations to this ideal of a national organization of each trade, the process is far from complete. Rival organizations within the same trades, kept apart by local, racial, or competitive jealousies, constantly weaken and distract the councils of Trade Unionism, and occasionally disgrace and discredit the movement by prolonged internecine quarrels, in which the interests of employers, employees, and industry at large are sacrificed to pitiful, puerile exhibitions of business incapacity. Indeed, we are assured that "it is no exaggeration to say that to competition between overlapping unions is to be attributed nine-tenths of the ineffectiveness of the Trade Union world." Moreover, "with the remarkable exceptions of the coal and cotton industries, and, to a lesser extent, that of house-building, there is hardly a great trade in the country in which workmen's organizations are not crippled by this fatal dissension."

Equally discreditable and disastrous are those incendiary defects of constitution which enable irresponsible and intemperate branches of powerful unions, like the Amalgamated Society of Engineers, by virtue of their excessive local autonomy, which is another name for lack of discipline and ability, practically to initiate strikes, and draw on the funds of the whole society in the name of "out of work" benefit, without the previous knowledge or consent of the central executive. Some light is thrown upon the exasperating possibilities of these trade jealousies and constitutional defects of organization by such events as the prolonged and discreditable strike in the Tyneside ship-building yards in 1892, "when thousands of men were idle for three months, not in order to raise the Standard of Life of themselves or any other section of the workers, but because the local Engineers and Plumbers could not agree as to which of them should fit up two-and-a-half-inch iron piping."

Whatever may be the difference of opinion about applying the lessons of Trade Unionism to the reorganization and perfecting of democracy at large, no one can fail to applied the converse effort to apply the teachings

of democracy — or of business efficiency and common sense, for that matter - to the tangle of conflicting organizations and constitutional defects which at present not only embarrasses the internal administration and impairs the militant efficiency of amalgamated or federal groups, but also deprives the employers of all confidence in those who meet them in the workmen's behalf, and creates in the public mind a distrust of trade-union methods. ciety has, indeed, a right to be protected against such incendiary methods on the part of those who undertake the important business of selling blocks of labor for future delivery, and of enforcing "uniform minimum conditions" of employment. The right to organize for the conduct of such important business carries with it the duty of organizing well. The right of any trade union leader or representative or "expert" to bargain with employers for the sale and future delivery of labor is measured by his ability to guarantee the faithful delivery of the goods he sells. Judged by such obvious standards, it must be confessed that trade union structure has less to teach than it has to learn.

On the other hand, those who are haunted by the old familiar spectre of a great, compact, centralized union of labor organizations on class lines, exercising an overwhelming influence in industry and politics, may find some social compensations in the difficulties and centrifugal tendencies in the way of any federation or amalgamation of the trade union world. The possibilities of such concentration have long been the conservative's nightmare and the agitator's dream. But the repeated failure of inclusive "general" unions and of heterogeneous trade amalgamations in England and elsewhere, no less than the existing obstacles to concerted action by related trades and branches of the same trade, are calculated to postpone indefinitely the realization of such conservative apprehensions and revolutionary dreams. Far from

any immediate prospect of effective and concentrated confederation, British Trade Unionism gives little promise of developing into anything more compact and formidable than "an elaborate series of federations, among which it will be difficult to decide where the sovereignty really And even this tentative unity must be purchased by the exercise of tactful ingenuity and by the conciliatory treatment of the numerically weak organizations by the strong,—conditions which will not suffer themselves to be reduced to any mechanical plan of proportional representation in a grand federal assembly. In fact, the farther organization departs from the simple, normal unit of the isolated trade, the less instructive and effective do the manifestations of democratic capacity become. Witness the dissensions which to-day cripple most of the great trades, with the comparatively recent and "remarkable exceptions of the coal and cotton industries"; witness the notorious darkening of counsel with words annually in the Trade Union Congresses: witness the eclectic enthusiasm for inconsistent programmes and ideals which has characterized the novitiate of "labor politics." Indeed, it is difficult to understand how anything short of the most transcendent optimism could account for the generous assumption that these wholly exceptional "governing assemblies of the Coalminers or Cotton Operatives to-day may be to a large extent prophetic of the future legislative assembly in any Englishspeaking community." This reasoning from the comparatively simple and homogeneous to the essentially complex and heterogeneous, to the exclusion of more obvious, if less pleasing analogies, is in keeping with the long-range reasoning which concludes, from the narrow premises of trade union experiment, that, in the future, government of the people, by the people, for the people, will give place to government of the people by salaried "experts," without the intervention of any such crude

expedients as the referendum and the initiative, written constitutions, and the rest of the equipment of the "old" democracy. Why the legislative assembly of any Englishspeaking community in which manual workers constitute four-fifths of the population, and some corresponding fraction of electors and representatives, should thus resemble the isolated "parliament" of a single trade, like cotton or coal, rather than some such representative body as the derided Trade Union Congress, is by no means clear. Even granting that the exceptional "Cotton Parliament" typifies what the legislative executive of the English-speaking democracy of the future ought to be, what reason is there for supposing that this future democracy will be any more successful in doing what it ought to do than trade union democracies are now? thing to reason from what has been in the past to what ought to be in the future: it is quite another thing to reason from what has been to what probably will be.

So much for the analysis of Trade Union Structure, which in good measure redeems its promise of being the most interesting and instructive portion of the book for the general student of democratic tendencies and institutions. Turn for the moment to that massive section of the treatise devoted to the bewildering details of Trade Union Function,—the account of what trade unionists try to do, how they try to do it, and upon what assumptions and general principles they proceed.

Happily, we are again able to bring to our aid one of the compensating merits of this discursive treatise,—the occasional epigrammatic retrospect. After struggling with the infinite details of prolonged and exhaustive chapters on trade union methods and regulations, the reader is relieved to find this summary: "For the improvement of the conditions of employment, whether in respect of wages, hours, health, safety, or comfort, the Trade Unionists

have, with all their multiplicity of Regulations, really only two expedients, which we term, respectively, the Device of the Common Rule, and the Device of Restriction of Numbers. The Regulations which we have described in our chapters on the Standard Rate, the Normal Day, and Sanitation and Safety, are but different forms of one principle.—the settlement, whether by Mutual Insurance. Collective Bargaining, or Legal Enactment, of minimum conditions of employment, by Common Rules applicable to whole bodies of workers. All these Regulations are based on the assumption that when, in the absence of any Common Rule, the conditions of employment are left to 'free competition,' this always means, in practice, that they are arrived at by Individual Bargaining between contracting parties of very unequal economic strength. Such a settlement, it is asserted, invariably tends, for the mass of workers, towards the worst possible conditions of labor, - ultimately, indeed, to the barest subsistence level,-whilst even the exceptional few do not permanently gain as much as they otherwise could. We find accordingly that the Device of the Common Rule is a universal feature of Trade Unionism, and that the assumption on which it is based is held from one end of the Trade Union world to the other. The Device of the Restriction of Numbers stands in a different position. In our chapter on the Entrance to a Trade we have described how the Regulations embodying this device, once adopted as a matter of course, have successively been found inapplicable to the circumstances of modern industry. The assumption on which they are based - that better conditions can be obtained by limiting the number of competitors - would not be denied by any Trade Unionist, but it cannot be said to form an important part in the working creed of the Trade Union world."

In spite of the inherent complexity of the problem and some display of technical terms, the student, or the general

reader, will have no great difficulty in constructing an intelligible chronological and intellectual panorama of the "Trade Union world," if only he succeeds at the start in ridding himself of the natural assumption that it differs essentially from the rest of the world of which it forms a part. What is true of the psychological outfit of men in general is largely true of trade unionists. If, therefore, we accept for the moment the somewhat crude and question-begging categories used in this treatise, society at large may roughly be divided into three psychological groups, -- conservatives, individualists, and "collectivists." And this division holds equally well for the trade union community. These three groups, again, will each have its own peculiar temperamental philosophy of life, -- political, industrial, social. The conservative will favor the status quo: he will bitterly resist innovations and alleged improvements in established political and industrial processes, machinery, and ideals. To the other two groups he will often seem a bigoted obstructionist, an enemy of progress. His theory of life and conduct, which is as obvious and satisfactory to him as it is incomprehensible and odious to his critics, may be called the "Doctrine of Vested Interests."

The individualist, on the other hand, is the apostle of "freedom." He believes in the orthodox economic creed of beneficent competition,—whatever pays best is best. He believes that all men have a natural and inalienable right to the pursuit of happiness, and to the enjoyment of as much happiness as they can overtake, without any officious interference in their conduct by the State. His vigorous and aggressive temper has no sympathy for the timid and retrospective creed of "vested interests." His hope is in the future, not the past. His creed is the optimistic, self-reliant "Doctrine of Supply and Demand."

Finally, the so-called "collectivist-minded workman," if we may accept the composite autobiographic description given of him, represents a reaction from this exuberant faith in unregulated competition and the survival of the strong; a protest against the inevitably baneful results of freedom and laissez-faire, under actual conditions of competitive inequality; an appeal, on behalf of the weak in the unequal struggle for standards of life, from the harsh verdict of competitive freedom to the social equity of State regulation; a comprehensive programme of regulated and socialized competition, with adequate legislative guarantees that the minimum conditions of self-respecting citizenship shall never again be encroached upon in the illusory name of competitive liberty and free contract,—in short, the new "Doctrine of the Living Wage."

Now the only common assumption which unites the conservative doctrine of vested interests, the individualist doctrine of supply and demand, and the collectivist doctrine of the standard of life, is that fundamental article of the trade union creed, - distrust of individual bargaining and belief in the necessity for concerted maintenance of minimum conditions of employment. On the other hand, the "regulations" used to enforce this minimum in any given section of workmen at the present day or in any given epoch of trade union history will differ radically, according to which of the three "doctrines" prevails; for it is interesting to observe that each of these divergent theories is characteristic not only of certain trades to-day, but of certain chronological epochs in the development of the trade union movement as a whole. Thus, for example, the doctrine of vested interests was characteristic of the earliest phases of Trade Unionism, when the eighteenth-century government paternalism could still be confidently appealed to for the enforcement of traditional regulations. It still found expression in passionate appeals for the enforcement of the obsolete Elizabethan laws in regard to apprenticeship and the fix-

ing of wages by magistrates, long after the new system of factory organization and the new philosophy of industrial liberty had rendered further enforcement of such regulations impossible. It was this spirit which inspired the long struggle against the introduction of new processes and machinery, lasting well into the third quarter of the present century. Then, as now, this doctrine was characterized by bitter opposition to innovation; by stringent efforts to establish trade monopolies, through the limitation of apprenticeship, the jealous exclusion of "illegal" men, the enforcement of entrance fees, and the maintenance of strict lines of demarkation between trades. was this proprietary conception which was embodied in what was long the favorite argument of the Amalgamated Society of Engineers and of other unions,—that prolonged and costly apprenticeship gave the artisan the same title to exclusive privileges in his trade that a diploma from the College of Surgeons would give to the professional . It was this same belated theory of vested interests, even in a nation's drinking habits, which in 1883 led the Mutual Association of Coopers — in emulation of the silversmiths of Ephesus of old — to complain that the spread of education and temperance, and the proposal of "Local Option," were dealing a dangerous blow to the business of their employers, the brewers. Hopelessly obsolete and generally impotent as the practices in question have confessedly become, the theory of proprietary interests in an occupation still asserts itself in discreditable "demarkation disputes" between unions, as to which of them is entitled to do certain work (such as the quarrel between the plumbers and steam-fitters already mentioned), and still colors the opinions and tacitly underlies the contentions of large numbers of English trade unionists.

The doctrine of the second, or individualist, group — the doctrine of supply and demand — is characteristic of that

virile phase of trade union development which began just before the middle of the present century, completely dominated the third quarter of the century, and has only in recent years encountered any serious and organized counter-movement. To the ordinary and unprepossessed student of labor organizations -as, indeed, to the public at large — this has seemed the heroic period, the most creditable and hopeful phase, of the trade union movement. It was during these years that the "new model" of amalgmated trade societies came to the front, equipped with all the now familiar and costly armor of friendly benefits, providing for sickness, accident, old age, and out of work. The sober and business-like self-help ideals of this "new unionism," embodied in such societies as the Amalgamated Engineers, gradually leavened the whole movement, and slowly redeemed the reputation of organized labor from the reproaches brought upon it by the heterogeneous, undisciplined, tempestuous, and ephemeral associations (or "general" unions) which embodied the Owenite vagaries and revolutionary enthusiasms of the decade after the repeal of the "Combination Laws" in 1825. It was this persistent and courageous type of Trade Unionism which, at the beginning of the seventies, astonished the world by emerging almost scot-free from the running fire of criticism, accusation, and parliamentary investigation, converted an adverse public opinion into a cordial verdict of social utility, and crowned its victories, at the close of the third quarter of the century, by securing from a conservative Parliament the legislative indorsement of an act which embodied the legal aspirations of half a century,—a complete charter of liberties, by which trade unions were "liberated from the last vestige of the criminal laws specially appertaining to labor."

To the "collectivist-minded," or more properly, perhaps, the "Fabian-minded" historian and social philosopher, who judges events with reference not to their im-

mediate significance, but their remote bearings on collectivist ideals, the splendid achievements of this heroic period are marred by one fatal inconsistency,—the complete conversion of the leaders of Trade Unionism to the anti-social (or anti-socialistic) philosophy of competitive freedom and laissez-faire. So completely did these sturdy champions lapse into the sophistical platitudes of Liberalism that their whole argument for legislative emancipation was based on the proposition that complete freedom of individual contract logically involved the freedom of the individual to bargain for the sale of his labor by any method he saw fit, including the collective method. Indeed, in the History of Trade Unionism we are assured that the heretical doctrine "that all men may lawfully agree to work or not to work, or to employ or not to employ, on any terms they think fit," was the whole burden of the speeches and petitions of the trade union leaders during the controversy in 1875. The workingman had, in fact, wrested from his opponents the logical weapons of "freedom" and non-interference. Such tactics were doubtless justified by the necessity of fighting the capitalist with his own fire, at a time when it was "hopeless to dream of converting the middle class to the essential principle of Trade Unionism, the compulsory maintenance of the Standard of Life"; but to become the sincere dupes of such belligerent reasoning was little short of rank apostasy and intellectual stultification. Indeed, we are assured that such professions by trade union leaders of faith in freedom of contract were perilously near cant, in view of the fact that, "when they contended that the Union should be as free to bargain as the individual, they had not the slightest intention of permitting the individual to bargain freely if they could prevent him." And they actually were preventing it wherever the "society men" were in a sufficiently large majority to make it safe to refuse to work with non-society men, as in the case of

the Northumberland and Durham coalminers, who habitually refused even to descend the shaft in company with a non-unionist. As further evidence of this intellectual inconsistency and complete loss of bearings, we are referred to the melancholy fact that a Trade Union Congress could repeatedly press for such "reforms" as peasant proprietorship, the purchase by the artisan of his own cottage, the establishment of the "self-governing workshop," the multiplication of patents in the hands of individual workmen. "and other changes which would cut at the root of Trade Unionism or any collective control of the means of production." All this, we are assured, is a "striking instance of the danger which besets a party formed without any clear idea of the social state at which it is aiming." And, incidentally, it is also well to observe the dangers which beset a historian who has too clear an idea of the social state at which he is aiming. In any event, we are told that "in the struggle of these years we watch English Trade Unionists driven from their Utopian aspirations into an inconsistent opportunism, from which they drifted during the next generation into the crude 'self-help' of an 'aristocracy of labor.'"

But, if this stiff-necked and "aristocratic" generation of trade unionists insisted on wandering aimlessly in the wilderness of "opportunism" and "self-help," it was not from any lack of proffered leadership on the part of social prophets with exclusive and authoritative information about the shortest way to the promised land of socialistic milk and honey. If they stuck persistently to ideals of self-help and supply and demand, it was from no lack of substitute philosophies of State help. The authors of the present history and philosophy of Trade Unionism are not the first to make an elaborate attempt to wean the British workman from his practical opportunism, and supply his "fatal lack" of a consistent theory of progress and a definite idea of the social state at which he ought to be

aiming. Not to mention Robert Owen and his indigenous successors, England has, since the days of Karl Marx, abounded in foreign prophets, for the most part without honor in their own country, and without great influence in the land of their sojourn. Nevertheless, the missionary propaganda of these exiles secured a certain number of influential and vigorous converts, who did their best to rekindle the slumbering enthusiasm of the Owenite and Chartist movements of the second quarter of the century. Gradually a distinctively English school of socialistic thought arose. These indigenous tendencies, sedulously cultivated by missionary exiles from Germany and other Continental countries, suddenly received a powerful impulse in the early eighties from the apostolic crusade of Henry George for the rescue of the unearned increment from the impious hands of private monopoly. The contagious enthusiasm and graphic simplicity of this new apostolic propaganda was seconded by the concentrated monopoly and aristocratic associations of landed proprietorship in England. The coincident discontent and discouragement of prolonged industrial depression, the dramatic exploitation by agitators of the problems of the unemployed and unemployable, the "bitter cry" of outcast London, and the concentration of public attention on the scientific and philanthropic presentation of the problem of the "submerged tenth,"-all these and many other influences contributed to the nervous tension and dazed expectancy of the situation. The methods of self-help, the doctrines of supply and demand, seemed powerless to grapple with the vast problems of industrial depression, the unemployed, the "submerged tenth," and the larger fraction of partially submerged. times were ripe for a new burst of enthusiasm for the help of those who could not organize to help themselves. The sporadic manifestations of this temper culminated in the dramatic scenes of the great Dock Strike in

1889. New leaders struggled to the front; the public relieved its mind by generous contributions of moral and money support; statesmen and churchmen hastened to intervene with their good offices; the theory of supply and demand was confronted with the stubborn fact that a great and unorganized mass of superabundant labor had at least temporarily secured the recognition of its rights, not as a human commodity subject to the inexorable laws of demand and supply, but as industrious fellow-citizens demanding for their labor at least the minimum essential to self-respect and social conduct.

Although the numerical revival of Trade Unionism which followed was not confined to recruits from the humbler or less skilled ranks of labor, it suggested in some respects a recrudescence of the more inclusive general movements of the Owenite days of 1834. This new kind of "New Unionism" was characterized by the advent of other leaders, with more inclusive aims, less "aristocratic" trade notions, and more general enthusiasm for State help.

So complete was the momentary discomfiture of the conservative elements of the "Old" Unionism of self-help that the triumph which the Parliamentary Committee of the Trade Union Congress had secured over the socialists of the Dundee Congress in 1889 was completely reversed in the Liverpool Congress of 1890. Mr. John Burns was able to boast that, out of the sixty resolutions passed by the Liverpool Congress, "forty-five were nothing more or less than direct appeals to the State and Municipalities of this country to do for the workman what Trade Unionism, 'Old' and 'New,' has proved itself incapable of doing. Forty-five out of the sixty resolutions were asking for State or Municipal interference on behalf of the weak against the strong." This exuberance, however, was of short duration. The leaders of the "New" Unionism promptly acquired more temperate ideas in the new

school of responsible leadership, and soon found themselves obliged to break with the radical Social Democrats. The ephemeral character of some of the organizations of unskilled workmen soon became obvious, the staying qualities of the "Old" Friendly benefit type of union reasserted themselves, and the enthusiasm for the "New" light-armed and less expensive type visibly declined.

Nevertheless, a broader sympathy and sense of class solidarity permeated the older organizations, liberalizing their constitutions and their temper, and predisposing them to listen to those who were beginning to formulate a new doctrine.—that the welfare of the whole community demands that no section of workers, however weak strategically, shall be reduced to conditions "inconsistent with industrial or civic efficiency." For fifteen years, we are told, "this idea of a 'Living Wage' simmered in the minds of Trade Unionists. The labor upheaval of 1889 marked its definite adoption as a fundamental assumption of Trade Unionism, in conscious opposition both to the Doctrine of Vested Interests and to that of Supply and Demand." On the other hand, this emphasis of chronological sequence must not be permitted to conceal the fact that these rival assumptions still exist side by side in the trade union world. Like their conservative, individualistic, and collectivist analogues in the political world, they must long continue to coexist, embodying themselves in old-fashioned restrictive regulations, or in sliding scales, aggressive bargainings and "alliances" with employers, or in further extension of legislative protection for the weak.

As to the actual future, the predictions of our authors are extremely tentative. "Any further application of Collectivism, whether in the Trade Union or the political world, depends, it is clear, on an increase in our scientific knowledge, no less than on the growth of new habits of social co-operation. Progress in this direction must,

therefore, be gradual, and will probably be slow. And the philosophical Collectivist will, we think, foresee that, whether in the regulation of labor, the incidence of taxation, or the adminstration of public services, any stable adjustment of social resources to social needs must always take into account, not only the scientifically ascertained conditions of efficiency, but also the 'established expectation' and the 'fighting force' of all the classes concerned."

As to the ideal future, they are correspondingly precise and dogmatic. They demand an unqualified extension of the policy of a compulsory trade minimum to a compulsory national minimum. Precisely the same economic arguments are applied to the nation as to the trade,—to the relations of trades within a national system of industry as to the relation of individuals within a trade. The argument is simply the fundamental trade union theorem that free or unregulated competition always means progressive degeneration of the strong and the survival of the unfit. Regulated competition is the indispensable condition of the survival of the fit. Omitting inequalities due to relative skill and efficiency, the only security for the strong is the protection of the weak against the consequences of his weakness. In other words, those sections of the workmen in a given trade who are compelled by their strategic weakness to accept inferior, "unfair," or "sweated" conditions of employment, whether in the form of wages, sanitary conditions, hours of labor, or intensity of exertion, are just to that extent involuntarily subsidizing their employer, just to that extent enabling him to undersell and drive out his "fair" and socially fit or stragetically weaker competitor, and just to that extent compelling the strategically strong workmen to accept a corresponding diminution. Therefore, a "common rule" or compulsory minimum, enforced by collective bargaining or, still better, by "legal enactment" in the form of factory legislation and government

inspection, is the only guarantee that the socially fit employer and employee will survive and continue to reap the legitimate benefit of special efficiency or skill.

In precisely the same manner, it is argued that competition between strong and weak trades, or regulated and unregulated trades, tends to the progressive decay of the strong and the corresponding expansion of the weak, sweated, or parasitic trades. For it is urged that, in view of international trade, the trades which seem farthest removed from competition with unskilled, or sweated, parasitic trades, may none the less be the victims of such insidious competition. The increased export of a commodity which owes its cheapness to the involuntary subsidy contributed by unfair or sweated conditions of production may well be at the expense of progressively decreased production and export of commodities which owe their relative dearness to compulsory maintenance of higher standards, whether by collective bargaining or special legal enactment. So that international demand, following the lines of cheapness, would throw production more and more into unregulated, sweated, and parasitic trades, causing a corresponding decline in the high standard trades and a progressive transfer and degradation of their displaced workmen to the ranks of the expanding parasitic industries. Hence the impressive paradox of economic progress,—that the only security for the strong is the protection of the weak, whether it be the strong section of a single trade or a strong trade in a national industry.

"The outcome of this analysis is that the strongest competitors for the world's custom, and for the use of a nation's brains and capital, will be the regulated industries on the one hand, the parasitic trades on the other—the unregulated but self-supporting industries having to put up with the leavings of both home and foreign trade, and a diminishing quantity and quality of organizing capacity

and manual labor." The regulated competition of the compulsory common rule therefore applies the test of efficiency, and is the only guarantee that the efficient employer, employee, and type of industrial organization will survive. Trade Unionism, however, is helpless to apply this remedy to the degrading conditions of parasitic competition. The cause of sweating is the strategic weakness of the superabundant reserve army of general and unspecialized laborers,—men, women, girls, and boys. The very proposal to organize these helpless groups and cope with the evils by the self-help device of the common rule, enforced by methods of mutual insurance and collective bargaining, is a contradiction in terms. Add now to these economic considerations the measureless injury to national character wrought by the infectious spread of degraded standards of health, morality, and public spirit, - from family to street, street to slum, and slum to city,—and the conclusion seems inevitable. "The remedy is to extend the conception of the Common Rule from the trade to the whole community, and, by prescribing a National Minimum, absolutely to prevent any industry being carried on under conditions detrimental to public welfare."

In this way alone can a nation avoid the disastrous results of indirectly subsidizing those sweated, parasitic trades which take more out of their employees than the wages and other conditions of employment will repair, and constantly call upon public and private charity to make up the deficiency and struggle with the consequent demoralization. In theory, therefore, the enforcement of a national minimum is simply an extension of the common rule to industry as a whole. In practice, it merely involves a further extension of the familiar method of legal enactment or factory legislation. Factory legislation already attempts to guarantee a certain minimum of education, sanitation, and leisure to children, women, and

adults in certain occupations. The national minimum would simply extend the guarantee to wages, and the application to all employees. The minimum adopted would be the wages actually paid by the better establishments, who would thus be helped by having their competitors raised to their level. The gradual raising of such a national minimum would alleviate the inevitable distress of industrial redistribution in favor of the fittest The problem of the unemployed would be alleviated by the elimination of degrading influences. The problem of the unemployable would of course remain. as it must under any conditions,—to be scientifically dealt with: but the chances of successful treatment would be greatly enhanced by thus clearly isolating the phe-The chief remonstance against the new régime would come from the profit-makers in the formerly subsidized parasitic trades.

But what has economic science to say to this remarkable series of propositions? What is to become of the theories of wages, the Malthusian "principle of population," and the time-honored formulas which discredited all the "artificial" aims, methods, and regulations of Trade Unionism, to the complete satisfaction of "the ordinary middle-class man," down to the last quarter of the century?

Now it must be admitted that the "collectivist-minded" historian, philosopher, and reformer seems to care very little what becomes of the logical subtleties purporting to embody the "natural" laws of remuneration, of population, and accumulation. It is obviously no part of the collectivist plan of propaganda to cultivate a respect for "any manipulation of economic abstractions, with or without the aid of mathematics." On the contrary, the archaic doctrines which the "middle class" has learned from old books and the lips of the last generation are constantly held up to ridicule, in the light both of expe-

rience and of contemporary economic teaching. wages fund is described as "a historical curiosity," with its logical machinery for automatic refutation of any possible scheme of progress, by showing the effect of a rise of wages to be fall of profits, or migration or diminished accumulation of capital, with the biological nemesis of increased population as a last resort. These are all vain imaginings. There is no predetermined wages fund. The incentive to accumulation of capital does not diminish with the rise in wages and fall of profits, but increases. Progressive rise in wages and standards of living does not encounter an insurmountable biological barrier, but just the reverse. The danger which North-Western Europe has to fear from such improvement is restriction of population, not a "devastating torrent of children." Finally, the classic economists are confronted with the confessions of their present-day successors, to prove that even the verdict of abstract economics is now in favor of the trade union contention, within certain limits, and that in the matter of Trade Unionism and the predetermined wages fund "the untutored mind of the workman had gone more straight to the point than economic intelligence misled by a bad method." But economists are to be distrusted, even bearing gifts; and the citation of favorable opinions concludes with the ungracious suggestion that these contemporary economic commendations are probably as little worthy of confidence as was the contrary verdict by the economists of a preceding The truth is to be learned by the examinageneration. tion of facts, not theories.

If, therefore, we turn from theoretical abstractions to the actual machinery of industrial organization, the absolute necessity for Trade Unionism once more becomes perfectly clear. For the competitive system of industrial organization resolves itself, in the last analysis, into a long chain of bargainings, in which the buyers have immense strategic advantages over the sellers, who are always bidding against each other to secure customers. strategic advantage culminates, as we have seen, in the "anarchic irresponsibility" of the private customer. He is the ultimate source of the cumulative pressure for cheapness, which is transmitted with increased intensity from consumer to retailer, from retailer to wholesaler, from wholesaler to manufacturer, from manufacturer to wageearner, until it settles with irresistible weight upon the isolated workman's standard of living. United trade union effort to support this crushing weight is, therefore, indispensable, both to protect the individual workman's standard of life and to prevent the whole industrial and social fabric from deterioration. There is something decidedly Marxian about this exposition of the inherent and diabolic depravity of the whole industrial mechanism of unregulated competition. Instead of the economic harmonies of beneficent competition and survival of the fit, under a "system of natural liberty," we have a malignant process of degeneration, which makes the good bad, the bad worse, and the worst most powerful. Under such circumstances any form of trade union regulations, even restriction of numbers, bad as it is, is preferable to perfect competition and the resulting subsistence wage. Even the capitalist producer cannot stand the pressure, and joins the revolt, seeking relief from the system of liberty in various forms of monopoly, - public franchises, patent monopolies, trusts and combinations, and devices for escaping the retailer and wholesaler by reaching the consumer direct, by means of advertisements and proprietary articles.

But it is not enough to avenge Trade Unionism and the unlettered workman against the pretensions of "obsessed" classic economists and middle-class employers. It remains for this analysis to show that Trade Unionism, instead of being artificial, has its roots in the instinctive and uncon-

scious manifestations of human nature. We have seen that the capitalistic revolt against industrial freedom finds expression in a great array of monopolistic tendencies. Over against this formidable array of monopolistic "dykes," which give the laborer little or no protection, and often do him great harm, the uncombined and resourceless wage-earner has always thrown up a powerful. mysterious dyke of his own,--- the "instinctive standard of life," the minimum below which he will not render the services of his trade. This instinctive dyke has always impressed students and observers; and it is elaborately insisted on by the classic economists, who dwell endlessly upon the fact of the customary minimum, differing in different trades and in different countries and in different localities of the same country, but could suggest no satisfactory explanation for the phenomena. Had they not been "obsessed by the fallacy of a predetermined wagefund, they would have perceived, in this clinging of each generation to its accustomed livelihood, a primitive bulwark against the innovation of fixing all the conditions of labor by 'free competition' among candidates for employment." To the "modern observer," who may be slightly obsessed with the notion of collective bargaining, it is evident that this "identical notion" of what constitutes subsistence "is in itself equivalent to a tacit combination." That which the obsessed classic economist saw, but did not perceive, was unconscious and instinctive Trade Unionism, equipped with an "incipient Common Rule," and supported by a prolonged refusal to work, which "is virtually a universal strike."

But, powerful as this unconscious and instinctive Trade Unionism is, it has grave defects, arising from the indefiniteness and lack of uniformity as to the standard of life, from lack of reserve funds to support the actual strikers, and from the fact that instinct and custom do not change fast enough to take advantage of the fluctuations of modern industry. Conscious Trade Unionism, therefore, simply remedies these defects. Tacit combination becomes explicit. The instinctive standard is made "precise and uniform" by elaborate standard rates, piecework tests, scales fixing working hours and limiting overtime, special rules for sanitation and safety, and all the infinite variety of trade union regulations. The method of Mutual Insurance supplies the reserve fund for strikes or out of work, which enables all alike to command a "reserve price" for their labor. The method of Collective Bargaining by the agency of "professional experts" and salaried officials keeps the price of labor from falling in bad times, on the one hand, and advances it promptly to take advantage of favorable fluctuations. The method of Legal Enactment crystallizes in the factory code the advantages gained, and "fortifies the workman's original bulwark by the unvielding buttress of the law of the land."

Thus is the involved evolved. The workman is a trade union animal. Instead of being "artificial," Trade Unionism is natural, almost inevitable. In the course of economic evolution it evolves, as a part of the protest against doctrines of "natural liberty." Not the economic man, but the trade union man, is the normal and scientific unit of industrial society.

Finally, in the industrial apocalypse, or prophetic "vision of the sphere of Trade Unionism in the democratic State," with which the Collectivist Canon closes, we see a purified and democratized Trade Unionism, stripped of the transitional imperfections of the doctrine of Vested Interests and the device of Restriction of Numbers, standing hand in hand with political democracy. The energies liberated by State enforcement of the National Minimum will find higher expression in the discriminating application of the doctrine of Demand and Supply to a perpetual improvement in the efficiency,

public utility, and consequent standard of life in each The gradual shifting to the State and special organizations of all the burdens of Friendly insurance with the permanent exception of Out-of-work Benefit, or "Donation"—will leave room for the oversight and organization of those technological branches of industrial education which are destined to replace the antiquated notions of apprenticeship and to be paid for out of the public funds. "With the progressive Nationalization and Municipalization of public services on the one hand, and the spread of the Co-operative movement on the other," trade unions will, therefore, assume the character of professional associations. "The Trade Union will be a definitely recognized institution of public utility to which every person working at the craft will be imperatively expected, even if not (as is already the case in regard to the appointment of a check-weigher) legally compelled to contribute."

Such, in outline, is the new collectivist philosophy of Trade Unionism, and, incidentally, of society in gen-The only adequate comment on such a body of doctrine is a concise statement of it. Taken in detail, and diluted by fourteen hundred - or even eight hundred pages of historical and speculative detail, the consistency and temperamental character of the whole body of doctrine may easily be obscured. It is obviously not so much a theory of economics as a temperamental gospel of social reform. It is another important and ambitious attempt to reveal to the British workman what ought to be his unconscious aspirations, purposes, and prepossessions, and to formulate a programme and insinuate advice in the name of history. It is another prophetic tender of intellectual leadership to those who are wandering aimlessly in the wilderness of opportunism and self-help. It is another plan for saving the race from the wasteful process of experimental progress, by furnishing in advance a consistent scheme of social philosophy. Like most gospels of social emancipation, it has its denun-There is something ciatory and its triumphant tone. eminently clear in the brutal frankness with which it breaks with the old world of conventional and accepted ideas. Instead of the doctrine of the beneficence of competitive freedom, we have the dogma of the total deprayity of complete competitive freedom; instead of liberty of individual contract, the new compulsory freedom of There is no sophistical attempt to collective contract. reconcile trade union ideals of a common rule and collective bargaining with absence of coercion and liberty of choice of non-unionists. Such industrial non-conformity is only tolerated as an illogical result of weak organiza-Realization of the trade minimum and the national minimum involves the deliberate abandonment of illusory ideals of liberty: otherwise Collectivism would have little interest in such realization. "Freedom," unregulated competition, is the worst possible state: hence any method of regulation, however imperfect and antiquated, is better than none. To efficient enforcement of the common rule ever thing else must how. The friendly benefits of Trade Unionism are, therefore, not amenable to the actuarial tests of scientific insurance. Insurance funds are only adventitious accompaniments of collective bargaining; and the workman's claim upon them for sickness, accident, and old age, is always qualified by the proviso,if there is anything left. For this reason Trade Unionism seeks to maintain the legal anomaly which now protects its funds against the prosecution both of employers and The militant ideal of collective disaffected members. bargaining also calls for jealous hostility to all insidious attempts to blur the lines between capital and labor, whether in the name of philanthropy or of individual Hence in this trade union decalogue we improvement. find the prohibition of all participation in schemes for profit-sharing, and for mutual insurance and friendly co-operation by employer and employee; in all such devices as "self-governing" workshops; in all liberal schemes for creating conservatism and content by making workmen owners of house or land. All these things tie the workman's hands, diminish his bargaining efficiency, and make for conservatism in the hour of contemplated strike. If the trade unions shall be true to this revelation of their nature and mission, the "vision" of the future is indeed stimulating and triumphant. The institution which the wise and learned and powerful have despised, rejected, and persecuted, shall prove to be the typical exemplar of the democratic spirit, the permanent embodiment of industrial ideals, the conscious realization of instinctive human nature, the corner-stone of the social and industrial edifice.

It is obviously a good propagandist move to try to show that large fraction of the population known as the working classes what they have been, are, and by right ought to be. Nothing succeeds like the conviction that the new reform is only an application of an old principle. Nothing predisposes the "unconscious" philosopher to live up to his newly revealed creed like reading a rational demonstration of a coherent and far-sighted policy into his groping, incoherent past. Once reform is found to be an application of long-recognized principles, half the battle is won, and instinctive conservatism becomes an ally of innovation. It is, therefore, an event in the history of any movement when it finds a competent historian. It is a still more significant phase of any movement when it finds, not only a sympathetic chronicler of its past, but a propagandist expounder of its unconscious philosophy, a formulator of its "inarticulate" principles and aspirations, a codifier of its past and prophet of its future. The political radicalism which styles itself Collectivism has clearly adopted trade unionism as the typical workingmen's organization, with largest political possibilities before it. It remains to be seen whether the workingmen's organizations will adopt Collectivism,— whether trade unionism will fall in love with its own portrait, drawn by a masterful hand, and endeavor to live up to its prophetic reputation.

Doubtless the absolutely impartial historian and investigator is an ideal desideratum, but it is part of the avowed psychological creed of this treatise that such an ideal attitude is humanly impossible. The inquirer is shrewdly warned that it "must never be forgotten that every man is biassed by his creed and his self-interest, his class, or his views of what is socially expedient. If the investigator fails to detect this bias, it may be assumed that it coincides with his own." In accordance with this didactic confession it is pertinent to ask, What is the dominating bias of these investigations? Certainly not the bias of the so-called orthodox, or classic, economist. comes in for his full share of contempt. Not the bias of that obsolete abstraction known as the individualist. He is treated as the economic scapegoat of civilization. Not the old-fashioned bias "which inspired the proposals of Lassalle, and most of the inferences drawn from Karl Marx's Theory of Value, whilst it still lingers in the declarations of German Socialism and its derivatives." It is the bias of that new and true collectivist socialism of the "unearned increment, arising from the progress of invention and organization of population and capital in dense masses, upon which the modern English socialist bases his demand for collective ownership of the means of production, and the subordination of the producer to the citizen, and the individual to the community."

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NATURAL DIVISIONS IN ECONOMIC THEORY.

In a recent article in this Journal I called attention to the impossibility of dividing political economy into four distinct parts, by following the traditional plan of division. Production, distribution, and exchange are not distinct I suggested a division of the science based operations. on sociological evolution. According to this plan the first division contains universal principles, which hold true whether society is organized or not. It defines wealth and describes the varieties of it. It describes also the agents of production, and tells how they severally work in creating wealth, and under what conditions they work well. It contains, in short, the treatment of labor, of capital, and of the manner in which they combine to make the earth fruitful. It tells of the various kinds of utility that these agents are employed to create, such as elementary utility, form utility, place utility. It presents a law of variation in the productive powers of these agents. whereby, if one of them becomes comparatively abundant, then a single unit of it produces comparatively little, while, if one of them becomes scarce, a single unit of it produces a great deal.

This part of the science has nothing to say about hired labor or loaned capital; for these things depend on social organization, and the distinctive fact about this part of the science is that it contains no facts or principles that depend on social organization. It contains only a statement of what takes place wherever man subdues the earth, and makes it useful. It can have nothing to say about wages and interest as ordinarily understood; yet it presents a law by which wages and interest are determined,—a law, namely, of final productivity of labor and of capital. In like manner this division of the science has nothing

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to say about market value, since that also is a social phenomenon, and not a universal one. Nevertheless, it presents the principle according to which values are determined; for it is a universal fact that final utilities are small when commodities are abundant, and that they are large when such things are scarce. A sailor stranded on a rock, and with a single sea biscuit in his possession, is in a position to appreciate the high final utility of bread. If fish are abundant, he can also estimate the low final utility of fish. He has no chance to make exchanges, but the law according to which exchanges are made operates in his case with a full measure of force.

The second division treats of Catallactics. It adds to the universal phenomena whatever results from exchanges. It is a science of organized economy, and puts before the mind a picture of society as a single organization, working in its entirety to produce wealth, and apportioning it among its members.

The socialization of economic life arranges producers in groups and subgroups. What we here term a group produces one complete article, and sells it. High organization, however, prevents any one body of persons from producing an article in its entirety; for no one set of men gets out of the earth, as it were, the rawest materials that enter into the article and fashions it to completion. The general groups are divided into subgroups.

A‴	B‴	C‴	H‴
A"	В"	C"	H"
A'	B'	C′	H'
A	В	C	H

Let A represent a raw material taken from the earth, and let A' represent that material carried by one stage towards completion. A" will represent it near to completion, and A" will represent it as quite ready for the consumer.

It may be that A is the skin of a live steer on a Western ranch, that A' is raw hide, that A'' is tanned leather, and that A'' is shoes. In like manner B is the raw material which ripens, through a similar series of changes, into B''', which is another article for consumption. C is a third raw material, and C''' is that material fully completed. H is the raw material that enters into the tools that are used in the various processes, and H''' is a complement of tools ready for use. Every one of the subgroups uses instruments and wears them out, and the H''' group supplies the waste.

We have now a severely simple picture of what is happening in the industrial world. The groups are innumerable, and they have their complexities; but the method of production and of distribution that is going on can be clearly described in terms of such a simple form of society as the one that our table represents.

In this second part of the treatise we are studying a static society. We want to know what happens in consequence of organization, and nothing else. We want to keep out of our minds what further happens by reason of changes that are all the while going on in society. the A" group is growing smaller and the B" group is growing larger, that change and all the influences that cause it are to be studied; but the study does not come at There are problems enough in a merely static this stage. society to occupy us for a while. We must therefore practise the isolating method in a heroic way. We must bring before our minds all that happens in consequence of mere organization, and nothing that happens in consequence of change, growth, and progress in the organization.

We must study, then, a society that, in imagination, we have reduced to a static state. What are the conditions of that state? The sign by which we know it is simple. It is that labor and capital do not flow from group to

group, and from subgroup to subgroup. A" does not grow smaller, and B" larger. Where there is no change in the comparative sizes of the subgroups, society is static.

This, however, does not tell us what are the fundamental qualities of such a society. It gives us a mark by which we could know a static society, if we could ever find one. What we need to know, however, is why labor and capital do not move from point to point in the system. What is the cause of their stationary condition? It is not that their movement is obstructed: it is that they have no inducement to move. A unit of labor or a unit of capital is as productive at A as it would be at A', or at B", or anywhere else in the group system. It can gain nothing by moving, and it stays where it is.

Perfect mobility on the part of the economic agents, without any movement, is characteristic of the static state. We cannot here describe it with any completeness. The lack of movement is due to a certain uniformity in the productive power of each of the two agents of industry in the different parts of the system. It is this that brings about a state of "natural values." Representing the producing groups in such a condition as this really describes what the classical economists had in mind when they said that everything tends to sell at its cost of production. If A" as a whole sells for just what it costs the entrepreneurs to produce it, and if B" and C" do the same, and if the particular utility that each subgroup creates also brings to the entrepreneur just what it costs him to create it, then all values are natural.

Cost values for everything really involve, in the end, uniform wages and interest. It is conceivable that, for a time, A" might be a scarce and high-priced article. The production of this article would then be stimulated, and the price would be reduced. It is also conceivable that, for a time, wages in the group A" might be high. That would mean, however, that entrepreneurs in the A"

group could gain something by hiring laborers out of the B" and the C" groups; and they would be quick to do it, so long as the difference in wages continued. There is always an inducement to create more of an article when the price of it is high; and there is also an inducement to import labor into the group in which wages are high. The complete adjustment which the early economists really had in mind is never completed until, first, every article sells for its cost, and, secondly, the cost of the agents of production, labor and capital, is uniform throughout the system. One employer pays as much for labor of a given grade as does another, and they all pay the same rate of interest.

A static society, then, is in a no-profit state; and it is a state of uniform productivity for labor and of uniform productivity for capital. These conditions account for the absence of movement between the groups. They tell us clearly why labor does not go from A" to B" or elsewhere. There is a universal equilibrium. The inducement to move labor or capital in one direction equals the inducement to move it in any other direction. Each unit of labor remains in situ, and each unit of capital does the same.

If we had time further to describe this static condition, we should reveal a number of things about it that are essential to the understanding of the dynamic state. The classical economists presented, under the head of natural values, an incomplete conception of a static society. If they had gone far enough, they would have discovered the law of Wages and Interest in the same way. Values are natural, in the classical sense, when nobody makes a profit, and when labor and capital are as productive in one place as they are in another. Wages are natural, if, in this condition, labor gets exactly what it creates. Interest is natural, if capital also gets what it creates.

If a régime of equalized productivity is also a condition

of naturally rewarded productivity,—if it is a condition in which labor gets, as wages, exactly what it creates, and in which capital gets, as interest, exactly what it creates,—then the conception of a static state is complete. There are no profits in such a state, and there is no movement of the economic agents from point to point in the system. By these signs we know it.

Of course, we cannot here go into the proof that such a state as the one that we have just described is in fact the one towards which, at every point, society is tending. A volume on Social Economic Statics should furnish the proof of this fact. What we are trying now to accomplish is to show what is the content of the second division of economic theory, where the science is divided in the manner that we have suggested. It discusses Values, Wages, and Interest in a static condition of society. It discusses Profits, to the extent of showing that in a static condition there are none. The task is completed when it has done these things. It rigidly keeps out of sight change, movement, friction, disturbance, reorganization,—everything that comes under the head of Dynamics.

We now undertake to say, in a general way, what is the content of the third division of economic theory. It occupies itself with those changes which the static division omits. It describes variations in which actual life abounds. If we are to describe it within any brief compass, we shall have to assume that our theory of economic statics is the true one, and that profits do tend to vanish, that values do tend to adjust themselves to cost, and that wages and interest do tend to adjust themselves according to the specific products of labor and of capital.

Even if we were wrong in these assumptions, there would still have to be a static division of the science, and also a dynamic one. If values, wages, and interest did not tend to conform to the standards that we have here de-

scribed, they would certainly tend to conform to some standards; and any standards that they could attain, and that, in the absence of social changes, they could hold, would be static ones. We shall assume that our theory is correct, and that cost values, on the one hand, and productivity wages and interest, on the other, tend universally to prevail. We shall assume that, if we could stop the progress of the world, and let competition act in ideal perfection, society would take the static shape and hold it forever.

Five comprehensive changes would have to be brought to an end, in the actual world, if this were to happen. First, labor and capital would have to stop increasing in quantity. The population of the world, the amount of its accumulated wealth, would have to remain forever fixed.

Secondly, methods of production would have to stop changing. We should have to put a quietus on inventive activity. Let there be no new kinds of productive machinery. Let the earth be tilled forever in the manner in which it is tilled to-day, and let the shops and the mills go on forever doing exactly what they are now doing, and in precisely the same manner. Let there be productive action, but no change in the mode of this action.

Thirdly, there would have to be no change in the relations that men sustain to each other in the process of organized production. The big establishment would have to stop swallowing the little one; and this involves the condition in which there are no little ones surviving, except those which, for local reasons, can hold their own in competition with larger ones.

Fourthly, there must be no changes in the character of the wants to be gratified. Humanity must stop that mental progress which forever multiplies and refines its wants, and makes it necessary to produce things in ever-increasing variety. In the static society the quantity of the productive agents, the method of their action, the form of their organization, and the wants that they supply are fixed. With either one of these elements changing, the régime of cost values and of uniformity in the product and the pay of labor comes to an end.

The static state is imaginary. It is like the level of surface of the sea that, in an imaginary way, we can project through the waves on a stormy day. If the winds were to stop, the sea would actually take a level and glassy surface; and this would correspond, in height and form, to the static surface that we have imagined. So, if economic changes and disturbances were to cease, the producing groups would take the static adjustment that theory calls for; and, as we have said, the test peculiarities of that adjustment are these: values would always correspond to cost; there would be no profits; wages would be uniform in the different groups; interest would be uniform; wages and interest would correspond accurately with the products that can be severally attributed to labor and to capital.

In the actual condition in which dynamic influences have left the world there can be no general correspondence of values and costs. Even the costs of one article. as it is produced by different entrepreneurs, are not uniform. In every subgroup there are establishments that are creating the product more cheaply than others can make With the same market price for the article some establishments run at a profit, and some at no profit. A few may be running at a loss. Which of the various costs is the one towards which values are tending? It is certainly not the costs in the poorest establishments; for these are losing money, and must soon reduce their costs or get out of the field. It is not the cost of the no-profit establishments; for these, unless they change their methods, will soon be in the same condition,—that of being obliged to stop running. The better establishments are increasing their output of goods and lowering the

prices, and this will soon make the no-profit establishments to become losing ones. The establishment that makes no profit to-day will incur a loss later, and will stop running altogether still later. This is one type of change that is going on in a dynamic state.

The standard towards which prices are tending is not even the present cost in the best establishment; for this establishment is steadily enlarging its output, and with the enlargement itself there comes additional cheapness. It is the cost that will be incurred in the best establishment, when that shall have enlarged its output to the full extent called for by static law. Let improvement in methods cease; let all other dynamic changes cease also; let a limited number of the better establishments in each group gather to themselves nearly all the business of that group: let smaller establishments survive when they can cater to a certain local business and secure a certain additional price; let costs everywhere equal values; and let values, for a particular product in a particular place, be uniform. Then we shall have reached the static adjustment towards which the actual and practical world is, under mere competition, tending.

It is prevented from ever reaching that state. Let us see how this occurs. Let us take a single one of the disturbances that makes society dynamic, and trace its effects. Let us suppose that a mechanical invention occurs, and that it multiplies the product of labor. It yields a profit to the establishment that first uses it, but this profit is held by a precarious tenure. It will vanish when the output of the goods shall have become so large that the price of them will conform to the new and reduced cost. Establishments having inferior methods will then have disappeared.

What will have become of this profit? In common language, it is said it will have given itself over to the public in the shape of cheaper goods. Another way of saying

the same thing is that it will have added something to the value of all other products. When the output of A" is doubled, the value of B" and that of C" are, by so much, increased. Labor and capital in B" and C" are virtually producing more wealth than they were doing, though they are producing the same amounts of goods. Moreover, labor and capital even in A" are producing amounts that conform to the increased products in B" and C". All labor and capital are, therefore, more productive than they were before. The profit that has vanished, under the influence of competition, has accrued entirely to laborers and capitalists. It is an increment of wages and interest. In disappearing as a profit, it has increased the pay of every workman and capitalist in the system.

How can the entrepreneurs perpetuate their gains if they have no monopoly? They can only do it by continuing to make improvements in the processes of production. Economy must follow economy, if the gains of entrepreneurs as such are to be anything. By a perpetual series of improvements the entrepreneurs may have an income that will continue, as it would do if they made only one improvement and had a monopoly of it. A perpetual series of such improvements will keep the costs of goods below their selling prices. It will keep costs tending always downward, and prices pursuing them. The prices will never eatch up with the costs in the downward movement.

There are innumerable problems here that we have not time even to state. It is unlikely that the series of improvements that perpetuates profit will long continue to be made by a single establishment. In the race for economy, one *entrepreneur* will get ahead, then another, and then another. The profits of one establishment may vanish, and yet a surplus gain of this kind may always exist somewhere within the subgroup to which that establishment belongs. Moreover, it is conceivable that all profit

might vanish within a subgroup, at a particular date, and that it might reappear later. Profits then might be intermittent: they might disappear, and appear again. At the vanishing-point, values would momentarily correspond with costs; but, with the next further economy in production that should be made, costs would get ahead of values

As a rule, profits vary from time to time in amount, but always exist somewhere within a producing group. Profit from any one cause vanishes, and adds itself to wages and interest; but profit, as a variety of income, perpetuates itself by an endless series of improvements.

in the descent.

This means increasing gains for labor. Wages at this moment are not so high as they will be when the profit that exists at this moment shall have added itself to wages and interest. By the time that that shall have been done, moreover, a new profit will have come into existence, calling for a further rise in wages.

The dynamic standard of wages, then, is an endless series of static standards, each one of which is higher than the preceding one. The standard of pay for labor is rising; and the actual rate of pay is pursuing it, but is always, by a certain interval, behind it. Dynamic science studies the interval and the rate of movement. It tells why the standard rises, why the actual rate pursues it, and why it does not overtake it.

The rate of interest would also be a rising one if economies in production only were to be considered; but, by profits and otherwise, great quantities of new capital are coming into existence, and this overcomes the influence on the rate of interest which improvement alone exerts. The amount of interest increases, like the amount of wages; but the rate of interest tends downward. This downward tendency, however, is the result of a second dynamic influence, and one that we are not now considering. If there were nothing to be studied except improve-

ments in method, both the rate of wages and the rate of interest would be forever pursuing rising standards, though the two standards would rise with different degrees of rapidity.

The origin and the destination of profit is one chief subject of Economic Dynamics. That science, if it were complete, would examine *seriatim* the various changes that bring profit into existence, and the mechanism by which, under the influence of competition, that profit is ultimately diffused throughout the whole of society. It would study the effects of this diffusion on wages and interest.

We have said that the interval between the actual rate of wages and interest and the standards towards which they are tending is a subject for such a science. So is the rapidity with which the standards change. In these studies disturbances and friction have to be considered. Everything that interferes with the creation of normal profit, and everything that checks the diffusion of it and renders the increase of wages and interest smaller than it would otherwise be, is to be included in the scope of the theory. Monopolies and quasi-monopolies act in this way. A fluctuating and untrustworthy currency does so. Unintelligent import duties and bad taxes generally do the same thing, and so do many other influences.

It is to be noted that the plan of division that we have here suggested applies primarily to the pure theory of Economics. Whenever, for purposes of convenience, it is desirable to separate the treatment of such practical questions as the currency, the tariff, taxation, from the treatment of Economic Theory, and to present each one in a book or a part of a book by itself, then each one of these practical questions may be treated, first, in a static way, and then in a dynamic way. In connection with the currency, for example, it is possible to assume, first, that society is generally in a static state, and that the volume and the quality of the circulating medium remain unchanged.

The static laws of currency may be completely examined under this hypothesis. Then changes in the volume of the currency and in the volume of business may be introduced, and the effect of such changes may be noted. The treatment of particular practical questions may thus be isolated, and each question may be discussed by itself; or, on the other hand, the static phase of such a subject may be discussed in the general division of Static Economics. and the dynamic phases may be treated in connection with Dynamic Economics. Under this latter plan the whole of economic science, theoretical and practical, would arrange itself in the three divisions that we have suggested. There is, however, much latitude admissible in discussing particular questions of applied science. What is clear is that each of these questions must, in some way, be treated first statically and then dynamically; and what is further clear is that none of them can be treated intelligently and completely, unless the treatment is preceded by the study of Economic Theory, both static and dynamic. It is the pure theory alone that we have had chiefly in mind. A natural arrangement of this branch of the science, as we claim, presents: first, the universal principles; secondly, the static principles; and, thirdly, the dynamic principles.

We have stated that five comprehensive changes constitute the dynamic movement. The theory of Dynamic Economics must study each one of these generic movements separately; and it must then study them in combination of each other, and see what resultant effects they all produce. This involves a myriad of detailed studies that we cannot even specify. Dynamic science is limitless.

Some of the most important applications of this theory have reference to the relation of different parts of the world to each other. We have spoken of society without defining the limits of it. Does it mean the whole world? In a sense, it does so, since there is no part of the inhabited

earth that could be turned into a desert or sunk beneath the sea, without producing effects that would be felt in every other part of the world. This interdependence goes to make the whole world a society. Yet, if society includes all men, it is certain that some of them are very slow to feel the effects of economic influences that originate in quarters remote from where they live. A profit created by a Yankee invention does not, within any time that we have to consider, raise wages perceptibly in equatorial Africa. We are studying and are obliged to study effects that are realized within short periods; and, therefore, we have to draw some limits around the society that we are describing.

On what lines does this delimitation of society proceed? The world is, in fact, divided and subdivided in a very complex way; but, for the purpose of illustrating dynamic laws, a very simple division may be made. There is an economic centre of the world. The distinguishing thing about it is that competition is very active within it. Labor and capital move to and fro readily, and profits that originate anywhere within this centre produce their effects, in raising the pay of all laborers and capitalists, within relatively short periods.

Around this centre there is an outer zone, which is separated from the centre by certain barriers. Competition within this zone is comparatively sluggish, and competition between this zone and the centre is particularly so. Labor and capital do not readily migrate across the boundary. Methods of production originating within the centre are not readily assimilated in the outer zone. It is a long time before the profit realized by the entrepreneurs of the central area affects workmen and capitalists in the outlying area; yet in the end it does reach them. Labor and capital do migrate across the boundary. Methods are, now and then, assimilated. An invention made in the highly civilized region will, sooner or later, affect the

economy of the less advanced one. If we could wait long enough, we should perhaps see a large number of the improvements that have recently been made in productive processes adopted within that zone in which the processes are now much more primitive.

Beyond this outer zone there is an outermost area,—the unlimited remainder of the world. Between this outermost area and the central one there will be, within any period that we care to consider, no connection except a trading one. Trade between the centre and the outermost area is particularly profitable, for the industries of the two sections are of widely different types; but within the period to which we limit our studies there will be no other connection of any importance between these areas.

A peculiarity of this rude mode of division of the economic world is the fact that the boundary lines are not fixed, but are forever extending. The centre is annexing belt after belt of the outer zone, and the outer zone is annexing belts of the outermost zone. Ultimately, perhaps, in that dim and distant period in which dynamic law shall have absolutely completed its work, the centre may have annexed the whole of the outer zone; and this outer zone itself, as thus annexed, may have already included all of the outermost area that is capable of annexation.

The economic centre of the world would, in this case, include the whole temperate area of the inhabited globe, in both hemispheres; while the unassimilated remainder of the world would be contiguous to the equator and to the two poles.

The graphic arrangement of the world in concentric circles or zones is, of course, a mere figure. It is designed to express the thought that some parts of the world are very intimately associated with each other, and other parts are divided from these parts by something that makes economic influences in the former parts less efficient in the latter. Very irregular is the geographic shape of what

we have called the economic centre of the world, and still more irregular are the shapes of the outer parts of it.

The most characteristic fact about these zones is that profit may originate and diffuse itself again and again in the central area before making much impression elsewhere. If we follow the effect of a particular profit, originating, for example, in the invention and use of a particular machine, we shall find that it is, at first, held by certain entrepreneurs. They hold it, as we have said, by a precarious tenure. Soon it will be an addition to wages and interest within the central area. Laborers and capitalists here, however, in their turn, hold this gain by a precarious tenure. That slow action of the economic law by which influences from the centre make themselves felt in the outer zone will, in the end, give the laborers and capitalists there a share of the benefit. Long before that has happened, however, further improvements will have been made; and they will have raised wages and interest within the centre to a still higher level.

Already, then, we see three divisions through which profit must pass. It is, first, a gain in the hands of entre-preneurs within that economic section where improvements originate. It is, next, the increment of wages and interest within that same section. It is, thirdly, made to become in part an increment of wages and interest within the outer section.

Profit can only perpetuate itself by means of an endless series of improvements. We leave monopoly, for the time, out of mind, and in doing so can find only one way in which the *entrepreneurs*, as a class, can perpetuate their income. It is by making a new economy in production before the fruits of earlier economies have entirely gotten away from them.

The premium on wages and interest in the central area, which keeps them above wages and interest in the outer zone, may be called quasi-profit. It is the entrepreneurs'

gains as surrendered to the laborers and capitalists in a favored region. These classes hold each particular part of the quasi-profit transiently. Sooner or later the laborers and capitalists of the surrounding area will share it with them; but this does not mean that, in the whole great area, wages and interest will ever be at a level. Quasi-profit, like profit itself, may exist forever by means of an endless series of accretions.

Here, then, are two permanent incomes, each specific part of which is held only transiently. Entrepreneurs cannot long keep a particular profit. Workmen and capitalists cannot forever keep a particular gain when it has become a quasi-profit. Nevertheless, entrepreneurs will never be without profit; and laborers and capitalists of the centre need not ever be without quasi-profit. It is all a question of leadership in the economic advance that the world is making. The competing entrepreneurs that keep ahead of others in the race for improvement may have surplus gains forever. The regions of the world that keep ahead of other regions may have surplus gains forever.

There are innumerable questions to be solved concerning the relations of the great areas of the world to each other, and the changes that are taking place in those relations. Particularly, at this date, are there questions of much importance concerning the relation of the economic centre to the very outermost areas of organized life. Governments are taking action that vitally affects these relations. A mere enumeration of the detailed problems that this presents would make an article of considerable length. It is enough, however, for our purpose, if we have described the character of the work that properly belongs: first, to the Universal Economic Theory; secondly, to the theory of Economic Statics; and, thirdly, to the theory of Economic Dynamics.

JOHN B. CLARK.

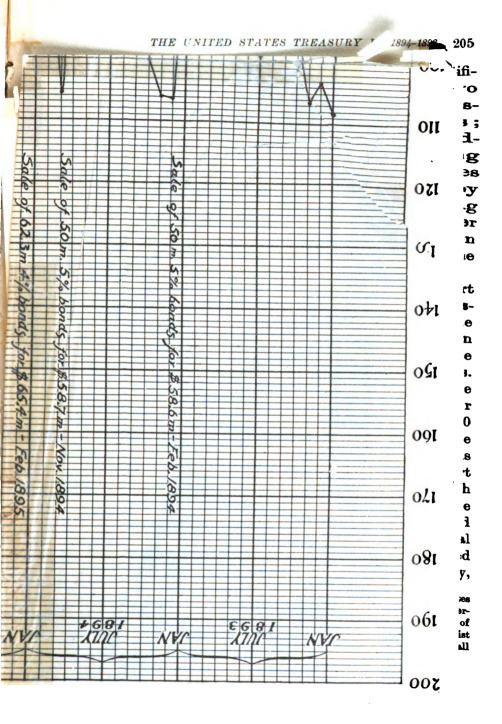
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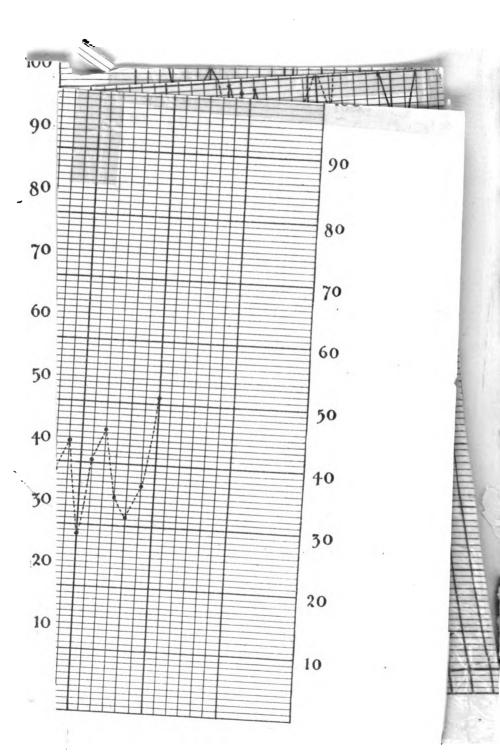
THE UNITED STATES TREASURY IN 1894-1896.*

I PROPOSE in the present paper to consider some aspects of the recent financial history of the United States, and more particularly some of the monetary operations of the Treasury during the years of depression that followed the crisis of 1893. The salient events of the period. the struggle with a declining revenue, the continued drain on the gold holdings, the repeated danger of the Treasurv's collapse, the successive loans needed to save it from virtual bankruptcy,—these are fresh in the memory of all. I wish to direct attention to one phase that has perhaps not received due attention. This is the mode in which the Treasury dealt with the outstanding legal tender notes during the years in question, and more particularly during the years 1895 and 1896. An attentive examination of this phase of the history will bring into strong light the difficulties under which the Treasury inevitably labors under our present anomalous system or lack of system, and it may also bring some light on mooted points in the general theory of money and banking.

The appended chart will make it easier for the reader to follow the movements to which I wish to direct attention. The two lines show what were the holdings of gold and of legal tender notes by the United States Treasury from 1893 to 1898. The unbroken darker line shows the holdings of gold, the dotted lighter line those of legal tender notes. In both cases the figures on which the chart is based are those of the net holdings at the close of each month. For the gold the line thus indicates the net holdings of gold coin and bullion by the Treasury, less gold certificates outstanding. For the legal tender notes the line indicates the holdings of United States

^{*}Read at the meeting of the American Economic Association, Dec. 28, 1898.





notes and Treasury notes of 1890, less currency certificates outstanding. In the Treasury statements the two kinds of legal tenders — United States notes and Treasury notes — are commonly stated in separate columns; and care is not always taken to show that the gross holdings at any time must be corrected for the outstanding currency certificates. In constructing the chart, figures have been used which show the net legal tenders held by the Treasury. The two kinds of legal tender notes, being in almost all respects identical, have been added together for the respective dates; and the net holdings have then been made out, as in the case of gold, by deducting the amount of currency certificates held by the public.*

First, as to the gold holdings. The lines of the chart bring into sharp relief the checkered history of the Treasury in its endeavors to maintain a gold reserve. The continued drain on its holdings led to repeated depletion and to the four successive loans of 1894-96. At the beginning of 1893 the stock stood at about 100 millions. After a year it had so fallen that in February, 1894, the first loan was made by the issue of 50 millions of 5 per cent, bonds; and the stock was thus brought above 100 millions. It soon began to fall, however; and, by the close of the year (November), another loan of 50 millions was necessary, once more bringing the line on the chart above the 100 million mark. Again, and this time with a rapidity almost fatal, the stock sank; and within three months a third loan had to be made,—the much-discussed syndicate loan of February, 1895. For a while the special stipulations made in this case with the lenders, designed to prevent the dissipation of the dearly bought supply,



^{*}Currency certificates are authorized only on the deposit of United States notes; i.e., of the legal tender paper which dates from the Civil War. No certificates may be put forth against the Treasury notes issued under the act of 1890. Hence, strictly speaking, the net legal tenders in the Treasury consist of (a) the United States notes held, less currency certificates outstanding, (b) all the Treasury note.

seemed to secure the desired end. During six months the stock remained, if not amply adequate, at least at a decent point. But by the close of 1895 and the beginning of 1896, a fourth fall took place; and in February, 1896, a fourth loan was made, this time the subscription loan of 100 millions. At last the end seemed to be attained: the gold of the Treasury, though somewhat depleted in midsummer of 1896, remained above the 100 million mark, and in the latter part of the year rose sharply. Through the following year (1897) it was steadily high, and for the time being apprehensions regarding it ceased.

Turn now to the other line on the chart. The changes there indicated, though much less noticed in general discussion, are no less significant. The holdings of legal tender notes by the Treasury undergo fluctuations as great as those in its holdings of gold. At the outset, in the beginning of 1893, the stock was small, exceptionally small. The inadequacy of the revenue of the Treasury to meet its current expenses had begun to appear as early as this, in the closing months of President Harrison's administration; and the cash on hand for ordinary expenses was at a low ebb. The stock remained small through 1893; but in 1894 it rose sharply and almost continuously, and by the opening of 1895 the Treasury held some 85 millions of legal tenders. After a decline. in the first half of this year (1895) the stock again rose, passed the 100 million mark before the year was out, and remained at some such figure through the greater part of For a period of about a year — from November of 1895 to October of 1896 — the Treasury locked up in its vaults continuously the huge sum of 100 millions of legal tender notes. Not until the close of 1896 was any serious inroad made on this accumulation. Then a sudden drop took place, some 50 millions of legal tenders were let loose within three months, and the holdings shrank to dimensions still large, but not so obviously in excess of any possible requirements for current expenses.

It is to the significance of the changes in these holdings of legal tender notes that I wish chiefly to direct attention. It seems the more worth while to do so because the public documents and reports issued by the Treasury tell us singularly little on the subject. Evidently, in the fiscal year 1895-96, a very important part of the Treasury's operations was the accumulation and retention in its vaults of some 100 millions of notes. Yet, while the fluctuations in the gold stock are much discussed those in the note holdings, though quantitatively quite as important, receive no mention. Neither in the reports of the Secretary of the Treasury nor in those of the Treasurer is there one word of reference to this striking part of the Treasury's doings. Nor is much said on the subject in the commercial and financial journals. The curious inquirer must ferret out the facts in the cumbrous statistical statements from the Treasury, and must then seek an explanation of the movement for himself.

Let us now recall some of the industrial phenomena of those years. The summer of 1893 witnessed an acute commercial crisis, which, once the fever had run its course, was followed by the usual period of lethargy and depression. During the crisis itself, cash was in eager demand, and was hoarded by individuals, by savingsbanks, and, indeed, by the commercial banks themselves: for there was a partial suspension of cash payments over the counters of the banks. The form of cash which was most in demand was the legal tender note. The public was so habituated to paper money for its daily transactions that gold was little asked for; while among the banks themselves there was the additional factor that gold was expected in many quarters to go to a premium, and so was sparingly paid out. The stock of legal tender notes in the New York banks shrank from 60 to 22 millions, while that of the Treasury (as the chart indicates) became virtually nil. The breakdown in the ordinary

machinery of credit was such that cash was urgently called for by individuals, by savings-banks, by country banks; and the total of the legal tender issues was in circulation, or, at least, in use by the public.

After the crisis the equally familiar phenomenon of a plethora of money appeared. With cessation of the acute stage, and with the ensuing depression in industry, the circulating medium, swollen by the great issues of Treasury notes under the act of 1890, became excessive. cash not needed for the current operations of trade, and no longer called for by the extraordinary demand of the crisis, flowed back to the central depositories with remarkable quickness and in remarkable quantities. close of October in 1893 the legal tender holdings of the New York banks once more were at 60 millions, where they had stood in the early months of the year. accumulation continued steadily, and before the year was out had raised these bank holdings to over 100 millions. For some time thereafter, and especially during the years 1894 and 1895, the legal tender reserves were heavy, remaining for many months at a time at a figure higher than 100 millions, and rising not infrequently to 120 and 130 millions. "Money" was a drug, and the rate of discount was at the minimum.

Evidently, the movement had its effect on the Treasury, too; and the accumulation of legal tenders in its hands was part of the same phenomenon,—the redundancy of the currency. But the accumulation did not appear so promptly in the Treasury, nor did it continue so uninterruptedly; and this side of the Treasury operations deserves to be followed with more detail.

A glance at the chart will show that during the years 1894 and 1895 the Treasury holdings of gold and of legal tenders move inversely to each other. When the paper line goes up, the gold line goes down; and, when the gold line goes up, the paper line goes down. Obviously, it is

to be expected that paper should accumulate as gold is drawn out. Notes being presented at the Treasury for redemption, they take the place of gold in the Treasury cash. The converse movement is not so simple. As gold accumulates, paper shrinks,—thus in the autumn of 1894 and again in the spring of 1895. The explanation is to be found partly in the ordinary position of the Treasury with relation to the Mint and partly in the extraordinary fiscal difficulties of the Treasury during the period in question. Ordinarily, gold which is brought to the Mint, whether from domestic mines or from abroad, is paid for by Treasury checks; and these may be settled at the clearing house in legal tenders, thus causing an exchange of gold for paper in the Treasury holdings.* But, in addition, the fiscal position of the Treasury from 1893 to 1896 compelled it to pay out large amounts from its cash on hand. Current expenses then exceeded current income, and some of the paper for which gold had been paid out was used in meeting the deficit. The precise form in which this came about was that the Treasury debit at the New York clearing house was large, and that the existing stock of cash (even though it had reached the government vaults through gold redemptions) had to be drawn on to pay the balances. The notes so paid out were turned into the already surcharged reserves of the New York

"Besides these two sources of ordinary gain to the gold reserve, there is another in the direct exchange of paper currency for the coin, where the paper is preferred for its greater convenience. Fortunate, indeed, has it been for the Treasury that, even during the most critical periods through which the country has recently passed, these currents of inflow have not been altogether checked."

Report of Treasurer of the United States, 1896, p. 9.

[&]quot;In ordinary times and under ordinary circumstances there is a natural flow of gold towards the Treasury, which is often limited only by the capacity of the Treasury to carry the specie. The product of our mines finds its way to the Mint, where it is paid for by checks; and these are presented at the counters of the sub-treasuries or through the clearing house in New York, as currency obligations. The result is an increase of the gold reserve and a dimination of the available balance of notes and silver certificates. Gold imported in the form of bullion or foreign coin takes usually the same course.

banks. The plethora of money in New York made it easy for borrowers to secure loans, and then draw out cash (i.e., legal tenders) without effect on the discount market or on foreign exchange. Whenever the balance of international payments caused gold to flow from the country (as happened to be frequently the case during this period), the legal tenders thus readily obtained were presented at the Treasury, and gold was so secured for shipment abroad. The same plethora made it easy for the timid or the speculative to secure cash for a "run" on the Treasury; and such a run, in the form of sudden and heavy demand for the redemption of paper in gold, took place, it will be remembered, in the first weeks of 1895, leading to the abrupt and much-criticised bond syndicate loan of February, 1895. Here we have the "endless chain," not simple, but intricate, having for its links the Treasury's duty to maintain gold payments, the fiscal deficit, the redundancy of the currency, the adverse balance in the country's international trade, and the general uneasiness bred by the repeated distress of the Treasury.

In 1896, however, the Treasury situation changes in one regard, at least. The great loan of February, 1896, when 100 millions of 4 per cent. bonds were sold for 111.4 millions of dollars, brought up the gold holdings once more. But now the legal tender holdings, which had risen to large amounts as paper had been redeemed by the Treasury, remain intact: they do not fall as the gold rises. It is not to be doubted, even though the Treasury reports are silent on the point, that this was the result of a deliberate policy. The heavy loans had brought in resources sufficient not only to meet the deficit in current expenses, but to impound a great quantity of legal tenders. Impounded accordingly they were to the amount of 100 millions and more,—locked up and put out of harm's way. Something of this sort had indeed been done in previous

years. In 1894 and in 1895 the redeemed legal tenders had not been paid out in toto. Considerable amounts had been kept after each successive loan; and the Treasury holdings had accordingly crept up gradually, though irregularly. In 1896 this impounding of the redundant paper was maintained deliberately, firmly, and on a large scale. As has already been noted, for nearly a year from November, 1895, to October, 1896 — the Treasury held steadily a hundred millions, more or less, of its own paper. Nor is it to be doubted that this procedure contributed largely to the attainment of the desired object. the protection of the Treasury's gold holdings. retention in the Treasury vaults of so great a quantity of legal tenders, coupled with the maintenance of the gold holdings at about the same amount, prevented excessive accumulation in the banks. The reserves of the New York banks, whether of paper or of gold, shrank to more moderate dimensions.* The loan market became firmer; and it was less easy to draw out legal tenders, whether as a means of getting gold for shipment abroad or for speculative operations.

With the autumn of 1896 a new turn in the Treasury

The cash, or "reserve," held by the associated banks of New York at certain dates in 1893-96, was as follows:—

·	Legal Tenders.	Specie
October 3, 1893	44.3	80.8
December 19, 1893	96.5	108.5
February 24, 1894	110.0	97.5
May 4, 1894	127.4	100.1
July 18, 1894	180.3	91.0
October 2, 1894	114 6	92,0
December 19, 1894	100.4	72,1
March 5, 1895	87.5	69,6
May 2, 1895	. 89.2	69.7
July 12, 1895	111.1	64 8
September 28, 1895	97.9	61.7
December 13, 1896	81.6	67.5
February 28, 1896	86.5	60.8
May 2, 1896	84.5	59.5
July 14, 1896	86,2	62.8
September 26, 1896	72,0	54.8

situation takes place, marking a new turn in the industrial situation. A last glance at the chart will show that the legal tender holdings fall rapidly and heavily in the closing months of 1896; while those of gold rise sharply. though not in complete correspondence with the decline in the paper. The fortunate events of that period are fresh in the memory of all, and their consequences still affect the condition alike of the Treasury and of the country. The failure of crops in Europe and the abundance of harvests at home changed almost every aspect of the monetary situation. Heavy exports caused gold to flow in from abroad, and much of this found its way into the Treasury.* Large crops and good prices for cereals caused a flow of money to the West and a draft on the cash holdings of the New York banks. The same conditions led to a general revival of activity, at first slow and hesitating,—as is common under such circumstances, and gradually stronger and surer. Hence the Treasury was able, not only to gain gold in one way and another, but to pay out legal tenders without any danger of their flowing back. Some of the links in the endless chain had now disappeared. The balance of international payments was no longer against the United States. Partly in consequence of the same causes that led to this fortunate change, the paper that was paid out by the Treasury was no longer obviously redundant. On the contrary, it was absorbed largely by shipments to the West, and remained in active circulation. Hence it was possible to meet the still-continuing deficit by paying out part of the accumulated legal tenders without encountering the ominous backflow of the previous years. A gleam of prosperity thus brightened the closing months of the second Cleveland administration, -- too late to redeem it from association with depression and disaster, and only in time to enable it to turn over the Treasury in flourishing condition to its fortunate successor.

^{*}See foot-note to p. 209 above.

We need not follow the course of events further. In 1897 the same conditions prevailed as in the latter part of 1896,—swelling exports, inflow of specie, revival of industry. The Treasury gold rose, its legal tenders stayed out. With 1898 the fiscal operations arising from the Spanish War affect the situation again, and open still another chapter in our financial history. The chapter which deals with the events consequent on the crash of 1893 closes with the year 1897, and we may proceed now to consider some of the lessons to be derived from our survey of those events.

First, as to questions of monetary theory. In the early decades of the century Tooke and his associates had maintained that convertible bank notes per se could not raise prices, their circulation being a consequence, and not a cause, of speculative activity and rising prices. But, they said, inconvertible paper and convertible paper issued by a government might be expected to have a different effect, since the mode of issue was different.—not by loan, but in the way of expenditure, - while the possibility of reflux was either absent or much weakened.* It may be a question whether so sharp a distinction can be maintained. No doubt it might be plausibly argued that the heavy issues of government paper in the Treasury notes of 1890 caused or at least bolstered up a régime of speculation and of sustained prices in 1890-92; but it would not be easy to prove that an equal issue of strictly convertible bank-notes would have had no effect or a less effect. I question whether a clear difference in effect could be satisfactorily proved in any specific case, still more whether any difference in degree could be even roughly measured. But, when we come to the other side of the movement.—the effects of currency issues in periods of depression,—the recent experiences of the

[•] See Tooke's *History of Prices*, vol. iv., part iii., chap. ii., especially sections 5, 6 (pp. 183-200).

United States may be set down as instructive, showing, as they do, that, when the down grade is reached, government issues are as powerless as bank issues to check the descent. Experience has amply shown that the greatest freedom and temptation among banks to extend their convertible note issues cannot prevent prices from falling during a period of sluggish industry, as, indeed, is also proved to be the case with their use of deposits. Abundant government paper is equally impotent. Elsewhere I have pointed out how the silver issues - dollars and certificates—under the act of 1878 followed rather than led the oscillations of industrial activity and of prices in 1879-89.* It might be suggested that these silver issues were ineffective because of the limitations on their availability.— the bulk and inconvenience of the actual dollars and the absence of legal tender quality in the certificates. But in recent years we have had another experiment with a kind of money which might be expected to do the utmost of which any paper based on specie was capable,legal tender notes, issued in any desired denominations, and freely available and availed of in bank reserves as well in every-day circulation. Yet, clearly, they were unable to stem a tide of depression and of falling prices. The legal tenders so plentifully held by the banks and by the Treasury in 1894-96, and recurrently paid out, have flowed back into these reservoirs with a persistency almost fatal to the Treasury. Put forth by the government in its ordinary disbursements, they have come back into its hands in unmanageable quantities, until finally the only mode of maintaining the specie basis was to submit to the necessities of the case, and store away the redundant paper. And when, in the fall of 1896, they were paid out and stayed out, the change evidently was due to changed industrial conditions. The sudden turn in export trade

The Silver Situation in the United States, pp. 72 et seq.

at that time caused an immediate call for currency for the crop regions, soon followed by a more permanent demand arising from a general revival of industry. The circulation of the legal tender paper, like that of the silver, has followed, not preceded, the decline in business activity, in speculative operations, in prices.

I will not undertake to discuss the wider questions in the theory of money suggested by these experiences. convertible legal tender notes are thus - for some time. at least - impotent to stem a falling tide due to other forces, does the same hold good of inconvertible notes? And, if so, what becomes of the good old principle that the range of prices depends on the quantity of money? I apprehend that it will not be impossible to answer these questions or to fit the phenomena here under review into a properly grounded and properly qualified statement of the traditional theory. In its foundations that theory seems to me still sound; but it needs to be fitted to the great changes which the civilized world has gone through during the past hundred years. Thus an issue of inconvertible notes or a great increase of specie does tend to raise prices,-nay, it may sometimes be predicted, will raise prices; but by a mechanism slower in its operation and more uncertain as to the quantitative result than the common versions lead us to expect. Whether there are differences in rapidity as well as in certainty of operation between inconvertible and convertible paper, and again between convertible paper and specie,—these are more delicate questions, on which perhaps it is idle to expect a precise answer either from theoretical reasoning or from actual experience. But in any case it is certain that there are prolonged periods during which the actual and effective circulation of convertible notes, and of inconvertible notes and specie as well, is a consequence rather than a cause in the general working in the mechanism of exchange.

The second lesson to which this survey of our recent experience leads is a more obviously practical one,—the need of legislation that shall prevent the recurrence of the misfortune of 1894–96. The system or lack of system in our monetary legislation remains the same, and what has happened before may easily happen again. If it be suggested that this is but a remote possibility, the answer is that the experiences of 1894–96 do not stand alone. Much the same thing happened a decade before; and it may not be amiss to recall the less conspicuous, but no less instructive, events of that earlier date.

In the years 1884-86 the silver currency then being put forth under the act of 1878 led to phenomena almost precisely similar to those of 1894-96. There had been activity and speculation in 1880-88; and during that time the silver currency, though not always easy to manage, had on the whole found ready circulation. With the failures and reverses of 1884, it became redundant, precisely as the legal tenders (inflated as these had been by the issues under the act of 1890) became redundant in 1894. Then, also, the silver was hoarded and tucked away in the Treasury vaults, as the legal tenders were in 1896. That the one form of currency was so handled at the earlier date, the other at the later, does not affect the nature of the operation. In 1884-86 the silver certificates, partly because they were restricted to the larger denominations (none under \$10 until 1886), did not readily make their way into circulation, and hence tended to flow back into the Treasury. They were thus the form of currency which the Treasury was led to impound. In 1894-96 almost all of the silver certificates had been changed to small denominations, and were absorbed in the every-day circulation, whereas the legal tenders, inflated by the issues of 1890, were redundant, and, being presentable for direct redemption in gold, were a more obvious source of danger for the Treasury. Hence it was now their turn to be hoarded.

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In one important respect, to be sure, the conditions of the earlier period were different from those of the later. and were more fortunate. The ordinary operations of the Treasury then yielded a surplus, and not, as in 1894-96. Consequently, the excessive silver currency a deficit. could be stowed away with comparative ease. I may be permitted to quote what I have said elsewhere in describing the operations of 1884-86:-

In the eighteen months between the beginning of 1885 and the middle of 1886 the government received over twenty-six millions in silver certificates which it did not reissue; paid out in addition some thirty-six millions for silver bullion which was coined into silver dollars, and in that form stowed away in the Treasury vaults; and materially increased its net holdings of gold. These enormous sums, of course, represent an excess of income over outgo. Notwithstanding the decline in its receipts as compared with earlier years, the government still had a surplus so large as to enable it to hoard sixty millions of silver currency and to add twenty-five millions to its holdings of gold. . . . In the financial history of any other country such a surplus would be considered a rare piece of good luck. We had it for so many years that we did not fairly realize what risks it enabled us to run without coming to grief.*

These same risks we continued to run, and we came to grief. In large part the same operations were carried on in 1894-96 as in 1884-86. Only in the later period there was no surplus in the ordinary operations of the Treasury, while the complications from the general business crisis were more severe. By successive violent measures — the four large bond sales—the last stage of disaster was The bond sales yielded not only enough to avoided. make up the deficit on current account, but an available surplus; and thus a round 100 million of legal tenders could be hoarded by the Treasury. When activity revived in 1886-87, the silver which the Treasury had accumulated could be let out with safety, and made its way

^{*} The Silver Situation in the United States, p. 32.

into active circulation; and so, when activity revived in 1896-97, the hoarded legal tenders could be let out with safety, and made their way for the time being into active circulation.

What has thus happened twice already may easily happen again. The volume of paper and silver for which the Treasury is responsible remains huge, and its means of dealing with the mass are not sensibly improved. oscillations in industrial activity will continue, and a volume of currency which is in active use at one time will prove redundant at another. A surplus in the Treasury may indeed enable a well-disposed executive to tuck away part of the excessive circulation for a time, and so give an artificial elasticity; but by what disturbing methods and with what uncertain results the history of the last twenty years amply teaches. In any case a continued surplus in the Treasury is equally undesirable and improbable, - undesirable, in that it tempts to extravagance; improbable, since both the special sources of the federal revenue and the oscillations of business activity make alternations of lean and fat periods inevitable. The statement, often heard, that the only thing needful in the way of currency legislation is to provide the Treasury with a surplus, indicates a sadly inadequate appreciation of the difficulties of the existing situation. Much more should be aimed for: in what direction and by what legislation has been repeatedly pointed out in the many projects for reform, strikingly similar in their essentials, which have recently been pressed on Congress. Let us hope that a clearer understanding of what has taken place under the existing conditions may lead to the adoption of measures for permanent betterment in those conditions.

F. W. TAUSSIG.

WHAT OUGHT TO BE CALLED MONEY?

It is a singular and, indeed, a significant fact that, although money was the first economic subject to attract men's thoughtful attention, and has been the focal centre of economic investigation ever since, there is at the present day not even an approximate agreement as to what ought to be designated by the word. The business world makes use of the term in several senses, while among economists there are almost as many different conceptions as there are writers upon money. Each author has some peculiar distinguishing mark of his own which he uses in determining what ought and what ought not to be included under the word. And so, even though one is not prone to attach great significance to definitions, and has no desire to suggest novel criteria of differentiation, he is practically obliged for the sake of clearness and intelligibility, in opening any careful study of a monetary subject, to make some confession of what he expects to mean when he uses the term; and he is in a sense expected to present his apologies or at least his reasons for not employing it in some of its other senses.

Although the word "money" has been made to designate conceptions of almost every conceivable degree of comprehensiveness, it is quite possible to trace certain broad lines of demarcation among them, and to group them all roughly under three, or possibly four, principal rubrics. In the first place, there are many writers in whose opinion the word "money" ought only to denote the standard currency; that is to say, the currency which has its own equivalent or "intrinsic" value, and for payments in which all notes and bills and other fiduciary certificates of exchange supposedly call. Secondly, there are others who extend the application of the term to all legal currency, which, in other words, means to all media of payment, proffered settlements by means of which will be recognized in the courts as sufficient. And then, finally, there is a great body of writers who, considering the

primary and essential function of money to be its serviceability as an intermediate of trade, assign the word to all devices which seem to them to be customarily acceptable for this purpose, regardless of whether or not they possess a substantial value of their own, or whether or not they have been given any peculiar authentication by the State. In general, in most of the great commercial countries of the world to-day. under the first conception of money, only the gold specie and perhaps a portion of the gold bullion would be subsumed: the second definition would include also the silver coins and other sorts of token money within certain legislative limitations,* together with such forms of bank or government notes as the law declared to be everywhere acceptable for payments; while money in the third sense would embrace, in addition to all of these, a variety of the other abundant expedients for effecting settlements which are especially designated by certain writers as "circulating credit," "representative" or "auxiliary" currency, or as "money substitutes."

At first thought one might naturally enough suppose that what should be meant by standard money and by legal money must be definitely determined by the legislation of a land, and that, although the denotations of the phrases might be very unlike at different times or in different countries, in a given situation they could elicit no real disparity of view. As a matter of fact, however, even with regard to these conceptions, anything like a complete agreement is as yet quite unattainable. In the case of standard money, not only may differences of opinion easily arise concerning the application of the expression to bullion † or to foreign coins, but in certain countries so great is the conflict between legislative declarations and governmental practice that even the question is left debatable as to just which metals the word "standard" ought to be applied. For example, in the United States both silver and gold are by law declared to be the standard metals; but gold is the only metal which is unlimitedly coined, and which enters

The subsidiary coins are, of course, usually legal tender only when offered in limited sums. In the United States subsidiary silver coins are legal tender only to the amount of \$10; in England, silver coins of all sorts are only legal tender to the amount of £2; and, in Germany, simply to 20 marks.

[†] See, for instance, Sidgwick, Principles of Political Economy, p. 231, note.

the circulation at its own value. A somewhat similar problem is suggested by the recent experience of Austria, where, although gold had been declared the standard of value by explicit statement in the law of 1892, no gold was in circulation, and there was no currency at a par value with gold. With nations whose only currency is one of paper, still subtler difficulties are presented with regard to the use of the term.*

The conception of legal money is perhaps more exact, but even its denotation is not without some knotty points. One certain source of disagreement is involved in the question as to whether legal tender notes which are redeemable ought not perhaps to be excluded from the concept, inasmuch as they are a means of payment not necessarily acceptable when offered by their issuers.† And there are other mooted points, such as, for example, the question as to whether a new issue of paper currency which has become subject to a discount, but which, nevertheless, has a "forced circulation," may be regarded as legal money when offered in settlement of debts that were incurred before the issue or before the appearance of the discount.‡

But, when one looks beyond the boundaries which circum-

*See Knies, Das Geld (2d edition, Berlin, 1889), pp. 350 et seq.; also Hildebrand, Theorie des Geldes, p. 62.

†This is a consideration which has been repeatedly urged by Professor Adolph Wagner. "Das Merkmal der Uneinlösbarkeit gegen ein anderes Geld hängt, wie man bemerken wird, enge mit dem Zwangscurs zusammen. Nur bei einem durchaus uneinlösbaren Papiergeld... kann man von einem gans allgemeinen Zwangscurs reden.... Ein einlösbares Papiergeld mit Zwangscurs ... ist daher trots des Zwangscurs kein eigentliches Papiergeld, mithin keine eigene Währung, weil der Zwangscurs ausdrücklich nur partiell ist und von demjenigen welcher dabei am meisten interessirt wäre, nämlich von der emittenden Bank, oder dem emittenden Staat nicht geltend gemacht werden kann." Geld und Credittheorie der Peel'schen Acte, pp. 65, 66.

The same argument is also to be found in Wagner's article on Papiergeld in Bluntschil's Staatswörterbuch, in his article on Bankuesen in Schönberg's Handbuch, i. pp. 471-474, and in his Beitrüge sur Lehre von den Banken, p. 34 et sea.

Practically, the same idea, that inconvertibility as well as the se-called legal tender quality is a requisite of real paper money, though not so explicitly declared, is nevertheless traceable in many passages of Tooke, Fullarton, and McCulloth.

; See Knies, Das Geld (2d edition), p. 406; also Savigny, Obligation-Recht, p. 409.

Among writers who have adhered to a restricted application of the term "money" to the standard conception may be mentioned Huskisson, J. S. Mill,

scribe the "standard" and the "legal" conceptions, one finds a still greater profusion of opinions as to what in general ought to be made the differential mark of money, as to whether, in particular cases, this or that agent of payment ought to be comprehended under the concept, and as to just where the limiting line of inclusion ought logically, or for the sake of convenience, to be drawn. There are certain very common contrivances for making payments which are not serviceable under peculiar conditions of the market. There are other familiar devices which are not available for all sorts of payments, or which cannot circulate outside of particular boundaries; and there are many which are only capable of effecting settlements when some further formality has been fulfilled. Each of these has suggested anew the problem as to how far those expedients which perform the monetary functions only when certain conditions are realized ought to be designated as money; and the answers which different persons have made have varied widely according to individual inclinations and personal estimates of convenience and expe-

Popular opinion to-day, we believe, has for the most part abandoned the limitations of what we have called the legal and standard definitions, and goes so far as to recognize as money all familiar means of payment which pass freely from hand to hand in settlement of obligations without the fulfilment of any further formality. It accepts as money all of those media of exchange which circulate without the necessity of indorsement, or of registration in books, or of conformity to any other condition than the mere transfer of the certificates of value from one person to another. It includes under the term not only coin and legal tender notes, but other government notes as well, and other issues of banks; at any rate, the

Chevalier, Hildebrand, Knies. See especially Knies, Das Geld (2d edition), pp. 238-275, 339-395.

The legal conception has had its supporters, not only among jurists, but in the ranks of the economists as well. It was adopted, for example, by Storch, Fullarton, Tooke, and McCulloch, and is employed by Lexis and Wagner among others to-day. In particular, see Tooke's chapter on "The Error of Confounding Paper Credit with Paper Money" in the History of Prices (vol. iv. pp. 171-183), McCulloch's note on "Money" in his edition of the Wealth of Nations, and Lexis's article on Papergeld in the Handwörterbuch der Staatswissenschaften.

issues of banks which stand under peculiar legislative control, and indeed, upon occasion, also the notes of other banks which are universally known and of indubitable credit. Nor is this simply the conception of the every-day world. From the time of Adam Smith to the present day there has been a continuous line of economic investigators who have employed the word "money" with this wider denotation, and at present this interpretation has become so wide-spread and so natural that it would be no exaggeration, I think, to say that among the English economists of our time there are only a comparative few who would not admit under the term "money" at least as many devices as the every-day world makes the word denote.

There are writers, however, who see no distinction of especial economic significance in the quality of being transferable without indorsement or registration, and who look upon a variety of other agencies as equally efficient media of exchange. Some of them, indeed, are willing to leave the word "money" undisturbed in its popular denotation, and resort to other expressions, such as "currency" or "circulating medium" to denote the more comprehensive idea. But there are others who are inclined to apply the term "money" much more freely than popular usage sanctions, and who chose to make it stand generically for devices of exchange. Several treat the deposit accounts of banks as money, but deem it inconvenient to include other fiduciary means of settlement.*

A few have gone so far as to make the word also represent

* This seems to be the view of Sidgwick, who shows with great clearness how, "in such a country as England, where deposit banking is fully developed and payment by cheques customary, the greater part of such money must consist of what has been called 'money of account'; that is, of bankers' liabilities or obligations to pay coin on demand, not 'embodied' or represented otherwise than by rows of figures in their books." It must be borne in mind, too, he adds later, that the medium of commercial exchange also "consists to a great extent of merchants', not brokers', obligations; that is, of bills of exchange, so far as they still circulate among traders and are not at once discounted. Again, there are certain widely accepted securities - the bonds of some governments, of some railways, etc.which are so much more convenient for transmission than bullion that they are frequently used as substitutes for bullion in the payment of international debts. Since, however, neither merchants' debts nor debts of governments form a medium of exchange currently accepted by society generally within a certain local range in final settlement of debts, it seems to me most convenient to call them not money, but substitutes for money." Sidgwick, Principles of Political Economy, London, 1883, pp. 233, 234, 245, 246.

mercantile bills, exchequer bills, the promissory notes of private persons, stock certificates, and, in short, all fiduciary devices to the extent that they actually perform the functions of a medium of payment and of trade; and, occasionally, a writer may be found who has gone even further, and has seemed to be of the opinion that in the end all goods are of the nature of money in so far as they possess a value in exchange.

Such is the bewildering confusion of language which confronts the student of monetary problems on the very threshold of his investigations. At least, three different courses are open to his choice. In the first place, he may give up altogether the attempt to specify what is meant by the word "money," and try to avoid the use of it whenever differences of opinion about its interpretation would be of consequence, employing in these relations more precise expressions, such as coin, legal tender, and currency, to denote the particular concepts of which he may be speaking. Or, secondly, he may use the term "money" indifferently for several or all of these conceptions, precluding confusion, where precision of language is of moment, by insuring that it is certain, either from the context or through explicit statement, in what sense the word is used. This may very often be accomplished by the simple use of prefixed words to which definite ideas have been attached, as, for example, in the expressions "standard money," "legal money," "popular money," and so on. Or, finally, he may select from the various definitions of the word "money" that one which, on grounds of general usage, convenience in handling, and the exigencies of language, seems preferably associated with the term, and apply the word exclusively to this, relegating to other words the designation of the other conceptions. In

*Jevons, for example, seems to have given up the attempt to define what constitutes money. "Much ingenuity," he said, "has been spent upon attempts to define the term 'money,' and puzzling questions have arisen as to the precise kinds of credit documents which are to be included under the term. . . All such attempts at definition seem to me to involve the logical blunder of supposing that we may, by settling the meaning of a single word, avoid all of the complex differences and various conditions of many things, each requiring its own definition. . . . By calling some money and some not, we do not save ourselves from the consideration of their complex legal and economical differences." Money and the Mechanism of Exchange, p 248.

favor of the first procedure, very little is to be said, despite the fact that it has been the method followed by at least one conspicuous writer. It is the wasteful discarding of an effective word in a region already suffering on account of the scantiness of its terminology. The second course mentioned - the use of the word "money" for a number of concepts of varying comprehensiveness - has the sanction of many precedents, since it is common enough for the definitions and denotations of class names to fluctuate in accordance with the particular ends or functions or contrasts which are held in mind in formulating them. But this employment of the term, like the first mentioned, also fails to give the word its greatest possible scientific value, because of its inexactness and the inevitable liability to meretricious reasoning which can so easily result from the confusion of its different senses. The third alternative — the application of the word "money" to a single definite idea, with its consequent well-defined reference to certain specific objects - has one paramount advantage. It makes for precision. It is only by selecting one definition and abiding by it that one can avoid terminological confusion, preclude misunderstanding, and give to the term "money" a scientific standing and importance. And on this account the last-named alternative seems preferable to either of the other possible ways of using the term, even though it may appear to involve a more or less arbitrary selection of the designation to be employed.

To which, then, of the many ideas that have been here presented, ought the word "money" to be assigned?

The choice of the particular conception to which the term is to be awarded is of course not open to an incontestable decision. It must, from its very nature, remain largely a matter of individual judgment and of relative expediency. No claim therefore of sacerdotal infallibility attaches to the use of the word which is here selected; and no pretensions are made with regard to it, except that it has been chosen after considerable deliberation and a careful balancing of alternatives.

The confinement of the word "money" to what has been alluded to as standard currency would seem inadvisable, if for no other reason because it involves as a corollary the very

unsatisfactory assertion that a country without a metallic currency is ipso facto destitute of money. But it must further be observed that there is no lack whatever of words to express this very conception, that one may refer to it easily and intelligibly as "coin" or "standard coin," or by the simple naming of the particular metal which serves as a standard. An addition to the terminology at this point would therefore be superfluous. The application of the word to the legal conception is open to similar criticisms. It involves a narrower denotation than is justified by familiar usage, and one could scarcely maintain that it is sanctioned by the exigencies of language, inasmuch as we already have a thoroughly adequate technical name for this idea in the phrase "legal tender." On the other hand, the stretching of the word to make it cover such means of trade as bank deposits and bills of exchange presents itself as even more objectionable, primarily because it is in the highest degree discordant with the traditional way of employing the term, and must inevitably tend therefore to arouse suspicion, provoke antagonism, and entail misunderstanding, and because at the same time there are plenty of other expressions, such as "currency," "circulating medium," and "means of payment," which can be used quite as effectively to represent the same all-inclusive concept. On these accounts it is difficult to see any sufficient reason for attributing another meaning to the word "money" than that for which it stands in the popular mind. The quality of circulating freely without the friction entailed by registration or indorsement may not present a distinction of the greatest economic significance; but it appears to have been accepted as the distinguishing mark of money by Adam Smith and Ricardo, as also by other noteworthy writers, and at the present day it forms really the decisive characteristic of money for all unsophisticated uses of the word.* At

*See Tooke's criticism of this conception of money, *History of Prices*, vol. iv. pp. 154-165; also Fullarton's discussion of the subject from a similar standpoint in his *Regulation of Currencies* (1844), pp. 28-44. Not unlike are the criticisms to be found in Chevalier's *La Monacie* (2d edition, 1866), pp. 57-64, and in the writings of Wagner and Sidgwick, already referred to.

The use of the term in the "popular" sense appears in the Wealth of Hations, Book I., chap. ii., and in Ricardo's Principles, chap. xxvii.

It was argued for also by Torrens, Sir Robert Peel's Act of 1844, London, 1857, chap. i.; by Lord Overstone, Tracts and Other Publications, 1857, pp. 199, 200;

the same time it obviously points to a distinction which is not without economic consequence. For, while it may be true that no sharp line can be drawn between the functions of money in this sense and those of several other forms of currency, there are unmistakably certain broad general differences, too important to be neglected, between their respective modes of operation,—differences based both upon the size and sorts of the transactions which they perform, and upon the varying rapidity and duration of their circulation.

It would appear then that, by using the term in this sense, one will incur less terminological censure than by any other course, will give the least possible occasion for misinterpretation, and will make a technical name available for an idea of some importance which is not otherwise easily designated.

A. P. ANDREW.

and by Sir Robert Peel and most of the other defenders of the English Bank Act. In opening his discussion of the principles of the act, Peel said: "In using the word 'money,' I mean to designate by that word the coin of the realm and promissory notes payable to bearer on demand. I do not include in that term bills of exchange or drafts on bankers or other forms of credit." The fact that they "pass from hand to hand without indorsement" he spoke of as a significant distinction of bank-notes. This, too, was substantially the conception of Francis A. Walker; see his *Money*, pp. 395-409, and *Money*, Trade, and Industry, pp. 1-17.

NOTES AND MEMORANDA.

INDUSTRIAL COMMISSIONS IN THE UNITED STATES AND IN AUSTRIA.

Under an act of Congress, approved June 18, 1898, the federal government has undertaken to follow the example of England, France, and Belgium in establishing a commission for the purpose of studying problems relating to industry with a view to formulating remedial legislation. The act provides that it shall be the duty of the commission to investigate questions pertaining to immigration, to labor, to agriculture, to manufacturing, and to business, and to report to Congress, suggesting such legislation as it may deem best upon these subjects.

The commission consists of five members each from the Senate and House of Representatives, and nine other persons. who shall fairly represent the different industries and employments, appointed by the President. The members appointed on the part of the Senate are Senators Kyle, of South Dakota; Penrose, of Pennsylvania; Mantle, of Montana; Mallory, of Florida; and Daniel, of Virginia. Those appointed on the part of the House are Representatives Gardner, of New Jersey; Lorimer, of Illinois; Livingston, of Georgia; Bell, of Colorado; and Otjen, of Wisconsin. The members appointed by the President are Messrs. Andrew L. Harris, of Ohio; S. N. D. North, of Massachusetts; Ellison A. Smyth, of South Carolina; John M. Farquhar, of New York; Eugene D. Conger, of Michigan; Thomas W. Phillips, of Pennsylvania; Charles J. Harris, of North Carolina; M. D. Ratchford, of Ohio; and John L. Kennedy, of Washington, D.C.*

Of these gentlemen, Mr. North is the secretary of the National Association of Wool Manufacturers, and was special agent for the Eleventh Census. Mr. Ratchford is president of the United Mine Workers' Union; and Messrs. Farquhar, Kennedy, and Donnelly (the secretary) have also been associated with labor orThe commission has organized, with Senator James H. Kyle as chairman, Thomas W. Phillips as first vice-chairman, John J. Gardner as second vice-chairman, P. H. Donnelly, of Chicago, as secretary, and William E. Sackett, of New Jersey, as chief clerk and disbursing agent. The headquarters of the commission are in the Bliss Building, Washington, where all communications intended for it or for the various sub-commissions and officers should be addressed.

Five sub-commissions have been created, as follows: --

- 1. On Agriculture and Agricultural Labor, Andrew L. Harris, chairman.
- 2. On Conditions of Labor and Capital employed in Manufacturing and General Business, Ellison A. Smyth, chairman.
- 3. On Conditions of Labor and Capital employed in Mining, John W. Daniel, chairman.
 - 4. On Transportation, Thomas W. Phillips, chairman.
 - 5. On Statistics, S. N. D. North, chairman.

The commission also has three standing committees, as follows:—

- 1. On Organization, S. N. D. North, chairman.
- 2. On Business, Eugene D. Conger, chairman.
- 3. On Procedure, John J. Gardner, chairman.

The chairman of the commission, Senator James H. Kyle, is chairman of the Senate Committee on Education and Labor; and the second vice-chairman, Representative John J. Gardner, is chairman of the House Committee on Labor.

The purpose of the commission, as declared in a report of its Committee on Procedure adopted by the full commission, is to ascertain the nature of the existing legislation of the several States and of the United States bearing upon industrial conditions, the actual operation of that legislation in its relation to the workingman, to the manufacturer and business man, and to the consumer, the character and effects of similar legislation in foreign countries, and how far it is applicable or desirable in the United States, and what legislation, if any, along new lines, is practicable or desirable for the improvement of

ganizations. Mr. Harris is a farmer, formerly lieutenant governor of Ohio. Messrs. Smyth, Conger, Phillips, and Harris are in business life. Messrs. Farquhar and Phillips are ex-members of Congress.—Editor.

industrial conditions, with a view to determining how far it is possible to frame uniform industrial laws, the adoption of which can be recommended to Congress and to the legislatures of the several States.

The government has not before commissioned any office to discuss proposed solutions of labor or other social problems or to make recommendations as to reform legislation. The establishment of the Industrial Commission is the first to attempt to ascertain, for the guidance of Congress and State legislatures, the bearing of laws and to apply the information in hand.

Each sub-commission will prepare a syllabus, in accordance with which testimony will be taken. Prior to the work of the sub-commissions the general commission will consider the subjects of combinations and trusts, education, immigration, taxation, and other kindred questions.

The ultimate results of the work of the commission in each of the fields of its inquiries are to be presented for approval by the full commission before they are transmitted to Congress, with such recommendations as the whole commission may decide to be appropriate and valuable.

The commission has also decided that it is impracticable to print all the testimony that may be offered to the several sub-commissions; but all testimony will be carefully indexed, both by subject and by witnesses, so that it will be easy for the members and for others to turn at any moment to any testimony which shall be taken. When the work of the commission in collecting information and data is completed, an enormous amount of service will be required to digest and formulate the matter collected. The commission is already actively engaged in its arduous undertaking, and the results will be looked for with great interest.

By virtue of an imperial decree dated July 21, 1898, a Bureau of Labor Statistics was created in Austria, and began operations October 1, 1898. Dr. Victor Mataja has been appointed its chief. The appointment is an eminently fit one, and insures the success of the new office.

The ministerial proclamation announcing the formation of

the bureau defines its duties to be "the systematic collection and preparation of statistical data relating to labor, and the periodical publication of the same for the purposes of social and economic legislation and administration." As the bureau was not created by legislative enactment, it has no compulsory powers. Its duties and work are thus along the line of those of kindred offices in the United States, Great Britain, France, Belgium, New Zealand, and other countries. But a new body, having an auxiliary function to work in connection with the Bureau of Labor Statistics, is the result of the ministerial act creating the bureau. This is a permanent Auxiliary Council of Labor, consisting of thirty-two members, eight of whom represent the various government departments. Of the remaining twenty-four, who are appointed by the Ministry of Commerce, eight are employers, eight are workingmen, and eight are specialists. The auxiliary commission is to give advice as to the subjects to be taken up by the bureau for investigation and in facilitating the carrying out of the work delegated to the bureau by bringing together for consultation representatives of the various interests affected.

It is the intention of the government that the bureau shall take up the preparation of annual strike reports, statistics of labor organizations, the question of the reform of accident and sick insurance, and the like, and also the publication of a periodical labor bulletin. The Auxiliary Council publishes its proceedings for each meeting, and these will be consolidated in the form of an annual volume.

CARROLL D. WRIGHT.

DEPARTMENT OF LABOR. WASHINGTON.

MESSES. MACMILLAN, of New York, announced for early publication The Development of English Thought: A Study in the Economic Interpretation of History, by Professor Simon N. Patten of the University of Pennsylvania; and The Theory of the Leisure Class: An Economic Study in the Evolution of Institutions, by Professor Thorstein Veblen, of the University of Chicago. Professor Patten will trace the development of thought in England since the Reformation, with regard to social progress and economic conditions. Professor Veblen will consider the leisure class as an economic factor in modern life, giving attention to the cultural aspects of the institution only so far as they bear on economic life. Both volumes will find a cordial welcome and an appreciative interest alike among students of economics and of philosophy.

Messrs. J. B. Lippincott, of Philadelphia, announce, also for early publication, a volume on Value, Price, and Distribution, by Charles W. MacFarlane, in which the whole range of the theory of exchange and distribution will be traversed, and the conclusions of the author, already published in part in periodical literature, will be set forth systematically and at large.

THE Cambridge University Press will publish shortly The Economic Works of Sir William Petty, edited, with introduction and notes, by Professor Charles H. Hull, of Cornell University. The editor has attempted to bring together all of Petty's published tracts of economic interest, and has added a Treatise of Ireland, from Petty's manuscript, and the Observations upon the Bills of Mortality of Captain John Graunt.

THE fourth edition of Professor Marshall's Principles of Economics (Volume I.), published during the quarter by Messrs. Macmillan, contains revisions in the mode of presentation, but, as in the second and third editions, no considerable changes of substance. The preface states that, "in the hope that the changes are nearly final, the present edition has

been made a large one." Professor Marshall's readers may now hope that he will be able to make rapid progress in the preparation of the second volume.

Professor Schmoller has published another volume of collected essays and papers, chiefly reprinted from among his contributions to the Jahrbuch für Gesetzgebung. The present series deals mainly with the economic history of Brandenburg and Prussia in the seventeenth and eighteenth centuries, but contains also papers on more recent topics, such as that on the organization and function of exchanges. Professor Brentano has also begun the publication of a series of his collected essays, of which the first volume will deal with questions relating to land and its inheritance.

Professor Seligman will publish shortly a revised and enlarged edition of his monograph on *The Shifting and Inci*dence of *Taxation*, first printed in 1892 in the publications of the American Economic Association.

MESSES. GIARD & BRIÈRE, of Paris, announce the publication of a Bibliothèque d'Économie Politique, which, like the Bibliothèque Internationale de Sociologie, will put before the French public the work both of their own and of foreign writers. The first volume in the new collection is a translation of Cossa's well-known guide to the history and literature of economics. Other translations announced as in press are of Pantaleoni's Principles, Schmoller's Grundfragen (as lately republished), K. Menger's volume on method, and A. Menger's on the right of labor to product.

THE Bulletin of the Department of Labor for September publishes some statistics as to the course of wages from 1870 to the present time in the United States, Great Britain, France, and Belgium, with a general result similar to that yielded by the statistics on the same subject for Massachusetts and for France, of which note was made in the last issue

of this Journal.* Money wages in this period have not shown the downward tendency of prices; they have held their own, and have even advanced. The figures now published by the Department of Labor for the United States were secured by its own independent inquiries, based on the pay-rolls of establishments continuously in operation through the period. Those for the three foreign countries (Great Britain, France, Belgium) were furnished, at the request of the department, by the several statistical bureaus of these countries. Naturally, information was secured for a greater number of occupations and localities in the United States than in the other countries; and the Bulletin notes that the comparative scantness of the data for foreign countries makes it needful to use them with caution. A general average of the results for each country is given; inevitably, as such averages must be, a lumped result of widely varying figures, and hence again to be used with caution; vet doubtless significant so far as the general trend of money wages is concerned, and confirmed on this point by the detailed tables for individual occupations and places.

The summarized table is as follows: -

Average Daily Wages in Gold in Certain Cities of the United States, Great Britain, France, and Belgium.

		1	rea	7 .		Great Britain.	Paris, France.	Liège, Belgium.	United States.
1870						\$1.30	\$1.06	\$0.59	\$2.20]
1871						1.80}	1.06	.60 1	2.391
1872						1.83	1.07	.61	2.45
1873						1.85	1.081	.64	$2.35\frac{1}{4}$
1874		•				1.364	1.081	.651	2.301
1875	•					1.38	1.111	.631	$2.24\frac{1}{4}$
1876						1.40	1.12	.63	2.18
1877						1.41}	1.151	.621	$2.24\frac{1}{2}$
1878		•				1.401	1.16	.601	2.804
1879						$1.37\frac{1}{4}$	1.16	.61 1	2.82
1880						1.871	1.211	.621	2.34
1881						1.87	$1.22\frac{1}{4}$.634	2.404
1882						1.391	1.241	.651	2.44 1
1888						1.401	1.24	.65	2.47
1884						1.40}	1.244	.644	2.49
1885						1.394	1.242	.631	2.471
1886	•					1.39	1.254	.63	2.471

^{*}See the note on "Recent Statistics on Wages" in this Journal, October, 1896, p. 105.

	Year.							Great Britain.	Paris, France.	Liège, Belgium.	United States.
1887								\$1.39 1	\$1.25	\$0.62	\$2.49
1888								1.40	1.25	.631	2.50
1889								1.404	1.26	.624	2.51
1890								1.414	1.811	.631	2.52
1891								1.434	1.31	.65	2.54
1892								1.434	1.81	.64	2.56
1893								1.441	1.32	.641	2.541
1894								1.442	$1.32\frac{1}{4}$.651	2.491
1895								1.45	$1.32\frac{1}{4}$.651	2.471
1896								1.49	1.83	.66 1	2.45
1897								_	_	_	2.441
1898								_	_	_	2.431

The upward movement is most marked in France, or rather in Paris, where there would seem to have been a rise of 25 per cent. In Great Britain and Belgium the rise appears to have been about 10 per cent. So in the United States the years 1895-98 show a range higher than that of 1870 by about 10 per cent., and this notwithstanding the fall in money wages which took place after the crisis of 1893.

It will be observed in the figures for the United States that a sharp advance in money wages is indicated between 1870 and 1872, and that, as compared with 1872, there is virtually no change in the period 1895-98. A similar relation between wages in 1872 and in very recent years was brought out in the statistics collected by the Massachusetts Bureau, these having shown that for the State of Massachusetts the movement between 1872 and 1897 had been down rather than up, and slight in any case. The year 1872, it may be inferred, had an unusually high scale of money wages, measured in gold. The explanation no doubt is mainly that this was the last year of speculative inflation preceding the panic year 1873. But it is possible that the correction for the gold premium may need also to be considered. At that period a peculiar one in many ways — the actual advance in money prices and incomes and the premium on gold seem not to have moved together; and, at all events, there is here a complication, of significance both for the economic history of the times and for the theory of paper money, which needs to be considered in the interpretation of this part of the statistical material.

RECENT PUBLICATIONS UPON ECONOMICS.

[Chiefly published or announced since October, 1898.]

L GENERAL WORKS, THEORY AND ITS HISTORY.

Cossa (E.). Del Consumo delle Richezze. Parte II. [Teoria del Consumo.] Bologna: Beltrami. 8vo. pp. 129. 2.50 fr. DEVINE (E. T.). Economics [pre-

pared for the use of the University Extension Society.] New York: Macmillan Co. 16mo. pp. 404.

FOURNIÈRE (E.). L'Idéalisme Social. [In Bibliothèque des Sciences Sociales.] Paris: F. Alcan. 8vo. 6 fr.

GABELLI (Alessandro). La Pro-prietà Sociale. Milan: Hoepli. 2

vols. 8vo. pp. 938. 15 l.
Giddings (F. H.). The Elements
of Sociology. New York: Macmillan Co. 8vo. \$1.10.
Grabski (S.). Karl Marlo (Karl
Georg Winkelblech) als Sozialtheoretiker. [In Berner Beiträge,
ad by A Oncken l. Barn: K. I.

theoretiker. [In Berner Belträge, ed. by A. Oncken.] Bern: K. J. Wyez. 8vo. pp. 116. 2 fr. Hobson (J. A.). John Ruskin, Social Reformer. London: Nesbit & Co. Boston: D. Estes & Co. 12mo. pp. 357. \$1.50.

JUDGE (Thomas). Social and Political Economy. [Edited by his son, T. G. Judge.] London: Simpkin. 8vo. pp. 178. 3s. 6d. Loria (A.). La Costituzione Economica Odierna. Turin: Frat. Bocca. 8vo. pp. 837. 16 fr.

MACFARLANE (C. W.). Value, Price, and Distribution. An Historical, Critical, and Constructive

torical, Critical, and Constructive Study in Economic Theory. Philadelphia: J. B. Lippincott.

300. \$2.50. 8vo. Anpp. nounced. EYMARCK (A.). Vocabulaire Manuel d'Économie Politique. Paris: A. Colin. 18mo. pp. 485. NEYMARCK Vocabulaire

5 fr. Nys (E.). Recherches sur l'Histoire de l'Économie Politique. Brussels: Castaigne. 12mo. pp. 232. 2.50 fr.

REICHESBERG (Professor N.). Die Sociologie, die soziale Frage, und der sogen. Rechtssozialismus.

der sogen. Rechtssozialismus.
Auseinandersetzung mit Lud.
Stein. Bern: Steiger & Co. 8vo.
pp. 131. 2.50 m.
SCHAUB (Fr., Priester). Die Eigenthumslehre nach Thomas von
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THE THEORY OF SAVERS' RENT AND SOME OF ITS APPLICATIONS.

THE effective desire of accumulation is displayed in different degrees of strength as between different times, different places, different individuals, and the different increments which make up, at any one moment of time, the saving of a single individual. The first, second, and fourth propositions have been adequately discussed by economists; but, so far as the present writer is aware, the third, while not wholly neglected, has never been worked out with completeness or given the emphasis which it deserves. The individuals of any country at any time have been divided customarily into two homogeneous groups,—those who have a desire of accumulation of sufficient strength to cause them to save and invest at the prevailing rate of return, and those who have not. It has, in general, been overlooked that the group which saves, instead of being homogeneous, is diversified,—is divided, according to saving capacity, into a great number of gradations or sub-groups.*

This classification, to be exact, should extend as far as separate individuals; because, to use Böhm-Bawerk's ex-

*Among recent writers, those who have come nearest to setting forth completely the premises and conclusions of this paper are: Böhm-Bawerk, in the Positive Theory of Capital, p. 279, where, in connection with his "marginal pairs," he shows that varying individual subjective rates of discount of the future are levelled up to one uniform objective rate, established by the market; Commons, in his Distribution of Wealth, p. 188; Flux, in the article on "Interest" in Palgrave's Dictionary of Political Economy; and Hadley, in a foot-note on p. 272 of his Economics. As we shall see, however, neither Böhm-Bawerk nor Hadley seem to have been aware of the significance of this feature of their analysis.

Among earlier writers we find that John Rae, the first to adequately appreciate and explain the first and second propositions above stated (and to whom, indeed, the science is indebted for the term "effective desire of accumulation"), also examined "the effects resulting from diversities of strength in the accumulative principle, in members of the same society." This chapter in the New Principles of Political Economy, pp. 198-207, contains many important observations on the characteristics and historical development of classes of savers; but, owing to the lack of a firm grip upon the marginal principle, it just falls short of a complete solution. Again, William Ellis, in the Westminster Review for January, 1826, p. 108, made some approach to the position of this paper, in that he graded investors of capital as such according as the reluctance to incur the common and average risks of investment would be overcome by 1, 2, 3, 4, or 5 per cent. of profit, as the case might be. But in spite of this recognition of different degrees of strength, in different individuals, of the effective desire of undergoing business risks (he expressly denied the necessity of a separate reward for the initial saving of capital, or abstinence), the marginal idea escaped him, and with that all chance of completely working out his problem. (A solution of Ellis's problem by a recent writer, Haynes, may be found in the Quarterly Journal of Economics for July, 1895, vol. ix. pp. 428-430.)

The fourth proposition has been most fully and lucidly discussed by Carver in the Quarterly Journal of Economics for October, 1893, vol. viii. pp. 40-61, and by Commons, pp. 18, 19, 185-187 of the work to which reference has already been made. An analysis of the saving of the individual, briefly stated and restricted to one moment of time and to one fixed rate of interest, has been made by Clark in the Quarterly Journal for April, 1891, vol. v. pp. 297-298, and in the Annals of the American Academy for March, 1893, vol. iii. p. 617; also, following Clark, by Marshall, on pp. 606 and 314 of the third edition of his Principles, and pp. 626 and 312 of the fourth edition. Clark's suggestion seems to have been the germ of the theory so highly developed; first by Carver and then to a higher stage, following him, by Commons. The present writer indebted to Clark for the term "intra-marginal," as used in this connection; although he had worked out the subject as a whole independently of him or of any of the recent writers mentioned above.

pression, each individual has his own subjective scale of discounting the future. But the other factor of the capacity to save—the opportunity to save which results from the excess of means over present pressing necessities—seems naturally to segregate individuals groupwise. Individuals certainly fall into classes of fairly homogeneous make-up, as measured by the amount of their incomes; and, among those who are the accumulators of capital par excellence in modern society, the amount of income is by far the more powerful factor determining the amount of capital which can be and is accumulated.

The matter of individual saving within the classes which I am about to describe needs, however, to be somewhat further examined. And this is so because the margin of saving and the different grades or layers of intra-marginal saving on the part of the individual cut across, to some extent, the marginal and intra-marginal saving of the classes themselves. That is, each individual member of a class has a margin of abstinence which will be higher or lower according to the prevailing rate of interest; he will save more or less as the rate of interest rises or falls. Now, at any given rate of interest which brings a certain margin of saving into play, he reaps a surplus on each of those increments of his total savings which would have been made, if necessary, on the lower margin corresponding to the lower possible rates of interest. At any time he makes a saver's rent on each part and on the total of his individual intra-marginal abstinence.

But for my purposes I wish to consider only the group surpluses or savers' rent of classes of capitalists at any time in our modern society. I shall therefore make the assumption (not an entirely arbitrary one, as will be presently explained) that there are classes of savers with fixed differences of marginal saving, and that the total possible savings of the class are made on that margin,

there being no individual intra-marginal or extra-marginal saving. That is to say, the members of each class as a class are supposed to save a certain amount at a certain rate, and to save no more if the prevailing rate is higher, and to cease to save entirely if it is lower.

Now, of course, the savers in each class will, as a rule, save somewhat more if the rate of interest should rise: and they will, most of them, keep on saving to some extent if it should fall. Nevertheless, this does not for practical purposes invalidate my hypothesis. It seems to me that there are, in fact, classes of savers established by a standard of interest about which the members of that class do the bulk of their saving. There is a set of capitalists, for example, who will save nearly as much as they are able and willing to save under any circumstances at 3 per cent. If the rate goes higher, they save only a little more than they were saving already, and that not entirely because of the increased motive to save, but also because the rise of the rate of return has increased their incomes, so far as these are derived from interest on capital, and thus their ability to save. If, on the contrary, interest falls below 3 per cent., they will continue to save in some degree for certain special reasons presently to be explained; but they soon lose the incentive to try to become or to continue capitalists on a large scale, and their total savings shrink rapidly, - more rapidly than could be accounted for by the decrease in their incomes.

It is recognized that in actual life there is more friction than is here taken account of. The volume of individual saving—both the accumulation of new capital and the maintenance of old—responds less readily to a fall in the rate of interest than to a rise. Many people keep on saving new capital out of habit, although they do not feel as well paid as formerly; and, again, capital once in possession will naturally be held on to at a lower rate than would have furnished a motive for its formation. Never-

theless, in the end weak savers cease to save new capital, and sell out their rights in the old.

To guard against possible misunderstanding, it is also perhaps necessary to emphasize the fact that, in classifying individual savers, I take into account their psychological characteristics and external circumstances at one moment of time; that is, at one moment of time somewhat structurally extended,—during a rather short period of time. At widely separated periods in his lifetime an individual may appear under such different conditions of motive, strength of will, and circumstances, as to constitute him, for the purposes of this discussion, a different individual.

Believing, with qualifications such as these, that there are classes of savers with certain marked characteristics in common as to the law of their saving, and that no serious error will arise if these classes are considered as absolutely separated,—if the overlapping of individual increments of saving into the different classes is neglected,— I will proceed to the positive statement of my thesis.

There is, first, at any time in our industrial society the class of marginal savers,—the people who save and invest for the sake of the return on the investment, and to whom the current rate of return is just sufficient to furnish a motive. Below this is a series of other classes of savers which would each in turn become the marginal class if the rate of interest should fall progressively. At any given rate of interest, therefore, the savers below the margin receive, according to the class in which they stand, a certain amount of savers' rent; that is, the interest they receive is not the rate necessary to induce them to continue to save, but the rate which the state of the market affords. Part of that interest, then, is the reward of their abstinence,— the compensation for the amount of disutility of saving which they feel; and the remainder is a surplus.

To illustrate, let us suppose that the current rate of interest is 5 per cent., and that savers are graded into

classes A, B, C, D, E, F, G, H, corresponding with even units of per cent. of return at which each would save if necessary. Let Class G represent the margin,—those who save to get their 5 per cent. and who receive no rent. Class H. whose members are extra-marginal, and who are only potential savers, would be shut out altogether. Class F, on the contrary, would be intra-marginal, and receive a rent of 1 per cent.; and so back to Class A, which would receive 6 per cent. Class A would receive 6 per cent. savers' rent (5 per cent. objectively, 1 per cent. purely subjectively), because it is supposed that the members of this class would, if necessary, continue to save the same amount at a negative rate of interest of 1 per cent. They have so very strong a desire to make provision for the future, for themselves or for their families, that they would be willing to pay an annual charge of 1 per cent. to have that provision guaranteed. Thus, at one end of the scale of classes of savers in the community the motive of ambition predominates, and at the other the motive of prudence. The motive of ambition we may call the marginal, or active, motive; and the motive of prudence, the intra-marginal, or passive, motive. Those who are actuated chiefly or altogether by the former make up, I believe, the bulk of capitalists on a large scale, or rather those who are becoming capitalists on a large scale; whereas, those who are actuated chiefly or altogether by the latter make up the bulk of small capitalists, represented in large part by savings-bank depositors and holders of policies of life insurance.

The first and most important application of the idea of savers' rent is to the difficulties which have arisen over the doctrine of abstinence. Not only socialists, but some conservative economists, have been led, by what seemed to them to be the anomalous character of saving on the part of very rich men, to deny more or less explicitly the validity of the long-accepted proposition that interest is

the reward of a sacrifice; that is, a payment for a cost in creating and maintaining capital.

Thus Böhm-Bawerk asserts that "Lassalle is for the most part right as against Senior," because "the existence and the height of interest by no means invariably correspond with the existence and the height of 'a sacrifice of abstinence,"—an argument repeated elsewhere in connection with the German "labor theories" of interest.* A still more remarkable passage in the same vein is found in the attack on Courcelle-Seneuil's theory of interest which, Böhm-Bawerk himself says, is "only Senior's abstinence theory clad in a slightly different dress." Here we read what is practically a reproduction of the famous gibe of Lassalle (who is mentioned by name and supported); we find, further, an attempt to prove that when a manufacturer borrows from a capitalist, there is a double abstinence, the second not paid for; and, finally, the statement that "people get interest, not because they work for it, but simply because they are owners." In this passage we read in one place that "foresight and saving do cost a certain moral pain" (that is, do cost a certain sort of labor), and, in another place, that "the non-consumption of wealth" is not "a labor." †

Böhm-Bawerk distinguishes the explanation of interest from its justification, the "is" from the "should be,"

^{*}Capital and Interest, pp. 277, 311. On page 278 Böhm-Bawerk announced that in his second volume he would give "exact proof" of "a certain influence on the origination of interest" exerted by "postponement of gratification,"—the "core of truth in Senior's doctrine" of page 276,—an influence which, however, is "neither so simple, nor so direct, nor so exclusive as to permit of interest being explained as merely a 'wage of abstinence." This promise is hardly made good, except very briefly on page 363. In those parts of the second volume which, in some respects, come nearest to fulfilment, the sections treating of "the technical superiority of present goods" (particularly pages 316, 330-333, 359), the idea of a cost in postponement of gratification, the idea of "present and future," is left quite out of account; and, in that part (Book II. chap. iv) where postponement of gratification or abstinence is most satisfactorily treated under the name of "saving," all mention of Senior is omitted.

[†] Capital and Interest, pp. 301-304; compare Positive Theory, pp. 123, 124.

and early in his first volume announces the former as the task to which he proposes to confine himself. In the second volume, nevertheless, we find him dealing extensively with the latter problem, and that one set of passages seems to justify interest, and another set seems to imply the contrary.* Again, in dealing with the explanation of interest and of the growth and maintenance of capital, there is one set of passages which explain those intimately connected matters by the abstinence theory, or by that theory clad in a slightly different dress, and another set which explain them quite otherwise.† Thus, on a very important part of the theory of capital and interest, this keen writer swings back and forth between two opinions. The oscillation notwithstanding, the general impression given by his earlier and later volumes is that Senior's doctrine of abstinence is to be abandoned. I

In the same way we find Marshall, in his handling of the doctrine of abstinence, impressed by the fact that "the greatest accumulators of wealth are very rich persons"; that he refers, without expressed dissent, to the "amusement" which Marx and his followers have found in "contemplating the accumulation of wealth which

* Positive Theory, pp. 360, 363, 364, 371; and 120, 121, 362.

† Ibid., pp. 102, 104, 106-118, 123, 124; and 316, 330-333, 336, 358, 359, 363. A further set of contrasted passages may be found which deal with Böhm-Bawerk's answer to the question whether there is saving involved in the maintenance of capital as well as in its first creation. Positive Theory, pp. 104, 110-111, 116, 117; and 119, 120, 362. In the last passage (p. 362), the sentence "Where capital has once been obtained by personal exertion and ability,"— all idea of saving as something additional to technical exertions or industry, necessary to the creation as well as the continued existence of capital, seems to have dropped out of sight. With this passage may be compared pp. 381-383 of vol. ix. of the Quarterly Journal of Economics.

‡ This view of the net effect of his teaching is supported by p. xv of the "Translator's Preface" to Capital and Interest, and by Hadley in Annals of the American Academy of Political and Social Science (November, 1893), vol. iv. p. 338. The passage in Hadley's article leads up to his theory of the justification of interest as an institution for the selection of business ability. This dissent from the classical teaching is not so strongly expressed in his Economics,—it is rather implied; but he proceeds to defend the system of interest in modern society as in the article.

results from the abstinence of Baron Rothschild"; and that (following Macvane) he substituted the word "waiting" for the word "abstinence," without clearly indicating how much of the properly understood significance of the old term attaches to the new. Indeed, he leaves it very much in doubt whether or not interest is always the reward of a real sacrifice, and even whether accumulation always involves "waiting." *

It is certainly within the bounds of truth to say that we get at best, from the conservative writers just examined, an uncertain and hesitating answer to these questions. The cause of this obscurity, as in all such instances, is confusion of thought. And this confusion of thought arises from the attempt to treat savers as a homogeneous body,—an undertaking which breaks down, and results in treating interest as a payment for a disutility felt by savers in the "average" of cases or in "most" cases, or as payment for something which is not, after all, a real or "painful" disutility.

The definite answer to every question concerning the doctrine of abstinence is found only when we consider that the current rate of interest at any time is the reward of abstinence for the marginal savers, and that other savers are receiving varying amounts of savers' rent. Or, to express the idea another way, the current rate of interest at any time is determined by the marginal productivity of capital, on the one hand, and by the marginal effective desire of accumulation, on the other; and this marginal effective desire of accumulation, which furnishes the last increment of capital in use, must be paid its necessary price, which price so fixes the market for

The italics are mine. See the whole passage, third edition, pp. 314, 315; second edition, pp. 292, 293; fourth edition, pp. 312, 313.

^{*&}quot;The accumulation of wealth is generally the result of a postponement of enjoyment or of a waiting for it.... The growth of wealth involves in general a deliberate waiting for a pleasure which a person has (rightly or wrongly) the power of commanding in the immediate present."

savings that those who have a stronger effective desire of saving reap an advantage which may be called a rent. Thus, at any time in our modern society, interest, with some people, is entirely "earned," in the sense that it is a reward for a sacrifice or self-denial that would not be made but for the reward; and at the same time with others interest is, to a greater or less degree, "unearned," in the purely economic, non-legal sense of the term. In primitive societies and newly developed countries, all savers are on the margin. There is then no savers' rent, just as there is no landlords' rent.

The terms "abstinence," "waiting," and "saving," in political economy, should mean precisely the same thing, - namely, a going without the present consumption of wealth which, in itself or in its equivalent, people have it within their power to consume; which going without is a necessary condition both for the creation and maintenance of capital under any and all circumstances.* Whether or not, and in what degree, this act of going without involves a felt privation or renunciation or sacrifice, in the ordinary sense of these words, depends on the character and circumstances of the individual. With some people, to go without present consumption or to postpone consumption involves privation and self-denial or restraint to such a degree that all they receive as interest on their capital, by virtue of the marginal exploitation of the arts and processes of industry by means of their capital, is strictly a reward. This holds true of all frontiersmen, and of all poor but ambitious capitalists starting in business. On the other hand, with many people in an advanced and wealthy community going without the full exercise of this command over present consumption in-

^{*}These terms, unqualified, should pertain only to an economic category. If we wish to call attention to the fact of an historical-legal category,—to the fact that at the present time some people perform for others the necessary abstaining, waiting, or saving in the process of production,—we should speak of "vicarious" abstinence, waiting, or saving.

volves a felt privation to so alight a degree that much and sometimes all of what they receive as interest is an unearned increment of gain or rent. The existence of savers' rent, objectively considered, is due to the fact that through the workings of competition all acts of abstinence, waiting, or saving, are paid for at one market rate. Subjectively considered, the existence of savers' rent depends upon the fact that all acts of abstinence, waiting, or saving, do not involve the same disutility or cost.

The chief reason why the intra-marginal savers have a stronger effective desire of accumulation than others is not so much because they have a more vivid realization of the future or more self-control, as because their incomes are so much larger that the marginal utility of money with them is less. A small part of the income of a Rothschild or a Vanderbilt will buy everything which can add any further appreciable increment of pleasure or social consideration. If, then, such men go on saving and investing, because they prefer that course to giving their money away, the gains which they receive on such investments are undoubtedly pure savers' rent.

It must be remembered that our analysis concerns the saving of capital by classes in a community at a certain time. Considering long periods of time, and regarding our classes of savers as present representatives of a race of savers, we find that in the end the differences between them depend upon differences in psychological make-up, and not on differences in outward circumstances (i.e., on size of income). The present generation of stronger savers save much under easy circumstances, because, speaking generally, their ancestors saved much under difficulties. This generation is intra-marginal in its saving, because that generation was marginal,—it did not shrink from making the most of its opportunities, although the fight was hard.

Even as to the very rich of the present generation, it may be doubted, from the general and social point of view, whether the incomes of such persons are to be regarded as consisting, to any great extent, of pure interest. individuals, any particular one of them may do what, as a matter of fact, many of them already do, -- delegate the management of property, and invest only in public funds or other forms of securities entailing a minimum of risk. In general, however, it would seem impossible for them to do this as a class. It is obvious that all of them could not, at the same time, invest in the safe, automatically managed forms of investment, without speedily reducing the rate of return on such investments approximately to zero. As a class, therefore, they must run risks, and must exert strenuously great powers of management in order to keep up their fortunes, to say nothing of increasing them. Securities are constantly falling in, and some means of reinvestment must be found. Industry is constantly undergoing change which displaces old forms of concrete capital. Saving, in the full, economic sense of the word, means not only the determination to save. but the finding of the ways and means of saving, - not only making investments, but making them pay. very wealthy, in actual fact, include within their number, as a necessary factor in the autonomy of the class, those captains of industry in whose hands is the "speculative fund" which is the chief element of material progress in As risk-takers, organizers, patrons of invenour society. tion, this active element of the wealthy capitalist class brings gains to society which justify the existence of the class as a whole. It is, moreover, obvious that the great profits of the more enterprising and successful of these leaders of industry far exceed the total of all possible savers' rent on their mere saving, in its narrower sense. If still it should be urged that these men do not "earn" their huge incomes, it can be only on the ground that they receive still another sort of rent,— the rent of exceptional ability.

But into further discussion with those who attack the present industrial order it is not well to enter here. argument in hand, which has grown into a digression, must be brought to a close by emphasizing the fact that interest in general - interest as an institution - is justified, because it is necessary in order to secure for society the benefit of the capital accumulated by the marginal This is so, even if we admit that all interest is pure interest; that is, that it is a compensation for abstinence or waiting, and for no other economic exertion or act. A necessary result of the institution of interest is that some interest is "unearned" by those who receive it, except in the non-legal sense of the word; but this fact does not disprove the expediency and justification of interest considered as a means towards increasing material wealth.

A ready application of the theory of savers' rent is to the question of the influence of the rate of interest upon the increase of capital. Some economists, observing the especial strength of the effective desire of accumulation in certain classes, and at the same time overlooking the existence of the marginal savers, have been led to reject the doctrine that saving varies, or tends to vary, directly with the rate of interest.

Properly understood, the question under discussion concerns the effect of variations of the rate of interest upon the volume of saving of the individuals of a given community, other things remaining the same. It is not, as has sometimes been supposed, a question of the effect on the volume of saving of a given high or low rate in different communities or at different times. Before answering the latter question, one would have to know the amount of capital on which the high or low rates were obtained, and the relative strength of the effective desire of accumulation, as established by habit and social custom, and the

general state of industry and arts, in the different communities and at the different times. As a matter of fact, it is generally true that those countries which have at any time a low rate of interest accumulate capital far more rapidly than those which have a high rate. This is so because in the former the low rate is realized on a much larger mass of capital,—the savable fund is larger; there is, or may be, a stronger disposition (relative to the rate) to accumulate from the savable fund; and, generally, there is in such a community, a far more progressive state of the arts, facilitating the exercise of the disposition to accumulate. At different periods in the development of any one community, again, all these factors vary widely.

W. L. Sargant was perhaps the first among modern writers to question the validity of the commonly accepted principle. In a work published in 1867, chiefly in criticism of Fawcett, Sargant maintained that fear of future want, for one's self or for one's family, is a motive for saving far more generally felt than the desire for enlarged income; that those actuated by the former motive are generally bent on amassing a certain definite sum, or a sum yielding a certain definite income; and that, therefore, the lower the rate of interest, the more they must and will save to attain their object.*

To a considerable extent, Marshall confessedly followed Sargant in this matter in the *Economics of Industry* and, to a lesser extent, in the *Principles*. In the end, what must be regarded as a complete support of the ordinarily accepted principle is given in each work; but it is expressed in terms that seem to indicate uncertainty and hesitation.†

^{*}Recent Political Economy, pp. 67-80. In an earlier work, The Science of Social Opulence (1856), pp. 246-248, Sargant had already briefly advanced the same idea. In view of his direct and indirect influence on certain later writers, about to be noticed, it should be mentioned that Sargant was for three years a student at the University of Cambridge.

[†] Economics of Industry, pp. 41, 42. Principles, third edition, pp. 317 and 313, 314; second edition, pp. 294, 295, and 291, 292; fourth edition, pp. 315 and 311, 312.

Much the same thing, in a more elaborated argument, is done by Sidgwick.* It may be readily admitted that the exact quantitative effects of a fall in interest upon the volume of saving of different classes, and of the whole community, are difficult or impossible of determination; but, nevertheless, this fact should not lead to a wavering statement as to the qualitative effects of such a fall, since there can be but one answer to that question.

In contrast with these last-mentioned writers, Cunningham, another member of the University of Cambridge, comes to a well-nigh unqualified denial of the traditional doctrine. He accepts Sargant's premises (perhaps not knowing that they originated with Sargant), and, without qualifying them with other principles, carries them to their logical conclusion. A distinction is made between those who save "because they wish to have a reserve fund" and those who save, or seem to save, "because they wish to have an income or to have a larger income." It may be doubted "that the latter is a real and distinct motive": and, at any rate, "the chief motive in saving is not so much the desire to have interest as the desire to have principal." And, accordingly, he concludes that "a fall in the rate of interest will not affect the desire to save at all; this will remain as strong as before, and accumulation might continue unchecked, even if the rate of interest were merely nominal." † And, again,— to go from Cambridge to Oxford,—we find that Thorold Rogers has asserted that "the motive for saving is the provision 'against emergencies"; that, "if people could get no profit or but a small profit or interest, they would still save, perhaps save all the more,"—that "a very low rate of interest stimulates saving." ‡

^{*} Principles of Political Economy, first edition, pp. 161, 162. Compare pp. 160, 163, and 290. See also the Fortnightly Review, vol. xxvi. (New Series), p. 408. Sidgwick does not express any indebtedness to Sargant; but it would seem that he was influenced by the latter, via Marshall.

[†] The Use and Abuse of Money, pp. 71 and 73.

[†] The Economic Interpretation of History, p. 235.

Of the recent work by Sidney and Beatrice Webb, space will not permit a detailed examination. Nevertheless, because it contains the most elaborate argument yet published upon the point in question, and because as a new work its value is yet to be tested, it may be worth while to examine it at somewhat greater space than has been given to the earlier volumes just passed in review.*

According to the Webbs, there are in society three distinct types of savers, including the whole population,the poor, the very rich, and the professional classes. Each of these is represented as saving extensively,—so extensively that there is hardly room left for increased total savings in society under any change of technical or psychological conditions. In view of the picture which is painted, one scarcely understands how there can be any problem of improvidence on the part of many of the middle class, any problem of pauperism on the part of many of the poor. In addition, the extent and force of the motives which lead to saving, apart from gain or increased present income, would also seem to be overestimated. Saving is represented as done - virtually all of it - from the motives of obtaining provision against future want, or of obtaining a definite income in the future; that is, practically all saving is done from other than what one may call the marginal motive. The poor — identified with the whole body of savings-bank depositors in England and with the penurious peasantry of France - are said to "go on" saving just the same, "whether profit or interest is reaped or not"; and the middle class is said to be affected by any change in the rate of profit "in positively the opposite direction" to that commonly supposed, "the amount of accumulation" with them "being increased by a fall in the rate and checked by a rise." Only the class of accumulators of capital already very rich are, strangely enough, at all influenced in the volume

* Industrial Democracy, vol. ii. pp. 610-632.

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of their saving by the gain to be obtained. And even these are only remotely affected by the rate of interest, since the volume of their saving is regarded (very properly) as determined primarily by the size of the savable fund which comes automatically into their possession,—by what remains out of their huge incomes after satisfying certain "habits of expenditure." It is doubtful, the authors say, if this class would save any more if interest were at 4 per cent. instead of at 3 or any less if it were at 2.

From all this one would never suspect that millions of middle-class people in England have, first and last, been ruined in the attempt to make investments yielding high profits; that of recent years many of the poorer classes have invested much in the shares of speculative stock companies; that even in France, not long ago, rich and poor alike poured untold treasure into the ill-fated Panama venture,—surely evidence that a high rate of return plays its part among the motives that bring about investment.

In our authors' conclusion we find that note of uncertainty and indetermination so characteristic of non-constructive writers who seek to overthrow those principles of political economy which long consensus of opinion has established. "To put it concisely," they say, "it is, to say the least of it, extremely doubtful whether the accumulated capital of the United Kingdom would be greater or less at the present time if the rate of interest on the best security, instead of falling to a little over 2 per cent., had remained at 5 or 6 per cent., the rate at which Pitt frequently issued consols. Still less is it possible for the economist to predict whether, our national habits being as they are, the growth in wealth during the next hundred years would be stimulated or depressed, if the rate should within that period fall even to 1 per cent."

There is, however, no lack of boldness in the application of this merely negative theory. Broadly speaking, the trade-unions of England are told that they need not refrain from putting the utmost pressure of which they are capable upon the capitalist employers through any fear of killing the goose that lays the golden egg. No matter how much wages are increased, hours of labor reduced, and the conduct of business interfered with, by the action of the unions or of the legislature at the behest of the unions, the accumulation of capital in Great Britain will not be checked, nor will capital flow out of the country. At least, neither of these things will take place to such an extent as to react adversely on the interests of wage-earners.

This advice to workingmen, in opposition to that of more conservative economists, is supported by other arguments than those given above, the essence of the further discussion being a misrepresentation of the real nature of high wages regarded from the point of view of the capitalists. If, as is alleged by our authors, increasing wages, shorter hours, factory legislation, and the rest, cause pari passu an increase in the efficiency of labor and in the exemption from business risks of a political-social nature, and hence an increase in the productivity of capitalistic industry as a whole,—in this case it is clear that the burden placed upon capital is not real, but apparent. High wages, then, are not at the expense of profits or interest. The whole question is begged.

But this is aside from the particular point of economic theory with which we are dealing; for the interesting fact is that the authors of *Industrial Democracy* make it very plain that they regard "the verdict of the economists" on the relation of the rate of interest to accumulation as a false one.*

Our authors are not averse, however, to leaning on the authority of the economists, if on their side; from Josiah Child and Adam Smith, to Nicholson and Smart. An attentive examination of the passages cited from these writers, and of their context, shows that they are less clearly in support of the proposition that the amount of saving is independent of the rate of return, than their citation in *Industrial Democracy* would imply.

Now it is much to be doubted whether there are many people determined only, as has been asserted to be the case, on obtaining a fixed, definite sum of income or of princi-The only fact known by observation, as regards income, is the general one that there are many people in the business and professional classes who accumulate for the purpose of retiring, or providing for a family, on the annuity to be obtained from their accumulations. it seems to be begging the question to assume that such people have a fixed purpose to secure a definite annuity from capital, and will therefore save all the more if the rate of interest falls. The probable fact is that, when the rate of interest falls, most of this class of savers moderate their ideas as to the amount of annuity necessary to maintain one's self or one's family in comfort. When interest is at 4 per cent., such a saver thinks an income, say, of \$4.000 is what he must attain, and saves accordingly. When interest falls to 8 per cent., he regretfully concludes that \$3,000 or less will answer, and saves accordingly. As regards principal, it is a matter of common knowledge that there are eccentric individuals closely akin to mere hoarding misers, who are narrowly bent (as Sargant alone definitely pointed out) on leaving behind them some particular sum, say 1,000,000 units of the money of the country. Such accumulators, by hypothesis, will pinch and spare all the more if the rate of interest falls. I believe they cut little figure, however, in the grand total of national savings.

But allowing that such is not the case, supposing that, for the reasons assigned by the writers we have examined or for any other reasons, there is a large number of people of various classes who would save more than they do now if the rate of interest should fall, and less if it should rise, what does it signify? They are merely one section of the receivers of savers' rent. Neither they, nor the much larger number of intra-marginal savers who would save

approximately as much as they do now at a lower or higher rate, control the situation. They do not supply the marginal increment of capital. If they did, the rate of interest would long ago have approximated to zero. The increase of capital at any time varies directly with the rate of interest, not necessarily absolutely, but in the sense that it is greater than it would otherwise have been if the rate rises, and less than it would otherwise have been if the rate falls. The total supply of capital is increased when the rate of interest rises, not so much because the existing marginal and intra-marginal savers save more as because a new set of marginal savers comes into play.

Keeping in mind the distinction between the absolute and the relative supply of capital, we see that this reinforcement of the traditional theory need not precipitate us into the feeling of dread common with the earlier conservative writers, and in strong contrast to the optimism of the opinions just considered,— the dread that any considerable burden put upon interest or profit would cause a "withdrawal" of capital from business, and an ominous shrinkage of the accumulated wealth of the community. That this result need not necessarily follow from the cause named, at any moment of time, and much less during a considerable period of time, is readily understood, when we consider the fact that savers are in grades, or

^{*} The classical doctrine of the relation of the rate of return to the volume of investment holds true in exactly the same way as the quantity theory of money holds true. It is no disproof of the latter theory, properly understood, to point out that there has been an absolute increase of money during an era of falling prices; and in like manner it is no disproof of the theory of accumulation to point out that there has been an absolute increase of capital during an era of falling profits.

[†]To be exact, according to my early analysis of individual saving, it should be said that capital increases when the rate rises because of a new wave of marginal saving, because of a new impulse given to those to whom the old rate was just short of bringing out their greatest effort. These savers, here called "a new set of marginal savers," had, in fact, been already saving something.

layers, together with the further fact that in modern society the volume of savings tends normally to increase quite independently from any progress of the arts sufficient to maintain or raise the rate of interest.

Mill had a glimpse of the true modifying conditions when he said that in any society "there are always some persons in whom the effective desire of accumulation is above the average, and to whom less than this rate of profit [i.e., the "certain rate" adapted to the psychological condition of the average man | is a sufficient inducement to save," which statement was followed by the assertion that in our present civilization this necessary or sufficient rate "tends to diminish." But, owing to his having the concept of the "average," instead of the marginal, "equivalent for abstinence," he went on to emphasize (which was his characteristic position) the supposed fact that in any fully developed and wealthy country the actual rate of profit "is habitually within, as it were, a hand'sbreadth of the minimum, and the country, therefore, on the very verge of the stationary state," from which state the progress of the arts, and of other forces by which the rate of profit is raised or sustained, alone can save it.*

Cairnes, following Mill in this matter, was led to discourage trade-unionists to as unwarrantable a degree as Sidney and Beatrice Webb have encouraged them. After admitting that the "lowest rate of profit will be different for different communities and for different stages of civilization," he says: "But under all circumstances there will be a minimum rate, below which, if the return on capital fall, accumulation, at least for the purpose of investment, will cease for want of adequate inducement." † The continuation of saving and investment, in any modern industrial society, does not hang on such a slender thread.

To bring the matter to a conclusion, one may say that,

^{*} Principles, Book IV., chap. iv., sect. 3 and following.

[†] Some Leading Principles of Political Economy, chap. iii., sect 2.

as the error of the optimists proceeds from regarding all, or nearly all, interest as a surplus or rent, overlooking the marginal savers, so that of the pessimists comes from regarding all, or nearly all, interest as a wage, a necessary inducement to save, overlooking the intra-marginal savers. A considerable but not excessive fall of interest - say of 1 per cent. - might at any time cause little decrease of the volume of saving on the part of the intra-marginal savers; and, although it forced the previously existing marginal savers out of the field, it might cause no absolute decrease of total capital, since the savings of the displaced savers may represent no more than the natural increase of the capital of the community. Such retarding of the increase of the growth of national capital would be, of course, an economic loss; and, therefore, here also, as with all the factors of production, the ideal of taxation and of all voluntary burdens put upon capital is, if possible, to avoid the margin. If a system of taxation could be devised whereby the receivers of savers' rent alone were taxed on the amount of their rent, there would then be no check to the accumulation of capital by reason of taxation.*

As for an absolute decrease of capital during considerable periods of time, a very heavy fall of interest, however brought about, may produce no such effect, because meanwhile the savable fund in the hands of the stronger savers may have so greatly augmented. In actual fact, the world has seen, of recent years, an enormous increase of capital in spite of a decline in the rate of interest to one-half of what it was a short time ago. Great numbers of former marginal capitalists and their present representatives have been, and are, forced out of the field; yet those who remain are able and willing to save so much that their places are more than made good.

^{*} The present writer has little belief in the practicability of any scheme of "burdenless," or non-industry-retarding taxation, because of the extreme difficulty of determining quantitatively what any sort of rent is.

And this brings us to a further, and concluding, application of the principle of savers' rent, or, rather, of the marginal principle at its basis. For this theory, it seems to the present writer, helps to explain the modern concentration of industry, hitherto too exclusively accounted for as the result of the technical advantages of production on a large scale. Undoubtedly, concentration is, in some measure, explained, perhaps entirely explained, on one side,—on the side of "units of management,"—by the changes in the arts and in the general methods of doing business. But it seems that another reason, a reason which explains at least another side of the phenomenon,the side of "units of ownership," — is that, as the margin of productivity of capital has fallen, the margin of saving and of savers has of necessity fallen with it. Individual businesses have been absorbed by corporations; and small corporations have been swallowed up by larger ones, partly, to use Professor Marshall's phrase, because of internal and external economies, but partly, also, because the new owners had a stronger effective desire of accumulation than the old ones. The progress of the technical arts in general tends to sustain the rate of interest, and so works against concentration of ownership of capital. It operates to sustain the motive for saving of the weak savers on the one hand, and on the other affords them a variety of new opportunities to embody savings. But in actual experience of recent years the progress of the arts has not been of sufficient force to sustain the rate of interest; and the weak savers, and those who employ the capital of the weak savers, have, in consequence, been driven to the wall.

The strong savers are strong, as has already been explained, principally as the result of their present financial position rather than as the result of superior psychological powers. To use Böhm-Bawerk's expression, they "discount the future" less than other men because of

their situation as to "want and provision for want," not primarily because they have more foresight and self-control. One may add, of course, that the strong savers have their huge savable funds, which make it comparatively easy for them to save, in part because of their superior powers in production; but it comes to the same thing in the end. Such men as the Standard Oil and Sugar Trust magnates are rich and successful and ambitious for more wealth; and, because they are rich and successful and ambitious, they are constantly pushing out with masses of fresh capital, and either investing more for the same return, or the same for a less return, or the same outlay for the same return in a longer period of production,—which means, in the last analysis, that they are undersaving other men.

It needs also to be emphasized that any force which lowers the margin of the productivity of capital, and thus directly depresses the rate of interest, has the same effect in bringing about concentration as those forces we have just been considering. Thus factory legislation and the exactions of trade-unions as regards hours and wages tend powerfully to drive out the marginal capitalist. In spite of all the clamor against concentration, many trade-unionists see clearly on which side their interest lies. They know by experience that the great employers can and do give the steadiest employment and the highest wages; that the small employers struggling to keep their heads above water pay the lowest wages, because they cannot pay any more.

"Profits" and "interest" are not of course synonymous terms; nor do they vary together strictly, as I have thus far, for the sake of convenience, assumed. It is obviously possible, and even probable,—as Sidgwick has pointed out,*—that at any time the first blow caused by increase of workmen's wages will not fall immediately on

^{*} Fortnightly Review, vol. xxvi. (New Series) p. 408.

the interest of capital, but will reach it only through a medium that will absorb at least a good part of its force; that is, as he himself explains it, it will merely cause a deduction from profits proper, or the "wages of superintendence" of entrepreneurs as distinguished from capitalists.

But this, again, means concentration,—concentration in the management of capital. A margin of weak entrepreneurs, working with borrowed capital, who found the former "wages of superintendence" and "compensation for risk" just worth their while, will be forced out of the The process may go on for some time, the strong wage-pavers absorbing the business and the workmen of their weaker rivals, because they have a stronger effective desire of paying wages and undergoing risks, as regards the rate of profits proper, which in turn is largely because the absolute amount of their incomes makes their standard of living more "compressible." But, in the end, interest must go down in harmony with the fall of grosprofits; and any further raising of wages must lead to concentration in the ownership of capital. This latter process in turn will, in the end, if hurried too fast by pressure from labor unions or legislatures controlled by them, check accumulation of capital, and make any further rise in general wages, for the time being, impossible.

Whether such a tendency towards concentration is regrettable or not, would involve a consideration of its political, social, and ethical aspects, as well as of the economic effects simply. These last alone have here been considered by way of illustrating the fundamental and neglected principle under consideration,—the varying strength of the effective desire of accumulation and the element of savers' rent.

C. W. MIXTER.

THE STUDY OF PRACTICAL LABOR PROBLEMS IN FRANCE.*

THE difference between the study of practical and theoretical economics, the fact that one can thrive while the other is neglected, is strikingly demonstrated by the position now occupied by France as regards her contribution to economic science. France alone among the leading nations has within recent years made almost no addition to the literature of pure political economy. The new study of economic theory, for example, led by the Austrian professors Wieser and Böhm-Bawerk, with their researches concerning value, has there made little or no impression, scarcely eliciting a contribution to the economic press. In spite of this neglect of the theoretical aspect of economics, however, an activity in the study of practical labor problems there exists that is exceeded in no other country of Europe. Sweeping as this statement is, no one, I think, can make a careful examination of the work now being done in France without being convinced of its justification.

In America one is accustomed to associate all real study of labor conditions with the great universities. All of our economic reviews are connected with, and under the editorial management of, the economic faculties of the different universities; and contributions to their pages are largely drawn from men who follow academic careers. The results are such as might be expected. There is much excellent discussion of principles, some historical work regarding institutions; but little examination of actual labor problems with a view to devising means for their solution, and still less effort to put into practical

^{*}Read at the meeting of the American Economic Association at New Haven, Dec. 28, 1898.

operation the measures of reform deemed to be the most desirable.

In France the condition of affairs is the reverse. In scholastic instruction of economics France is notoriously weak. On the other hand, the study of social questions outside of the universities is pursued with great ardor, and is wide-spread. The real centres of education and work in this field are the important economic associations, and, more than all, the numerous organizations for the promotion of particular measures of reform the membership of which is drawn largely from men of affairs, those prominent in public life or in journalistic and business undertakings. Within recent years there have been organized in France a number of such associations, each devoted to the promotion of reform in a certain field, such as the improved housing of the working classes, the study of workingmen's insurance, the promotion of cooperation and profit-sharing. Their work has resulted not only in the accumulation of a great deal of information concerning these subjects, but in the practical introduction of the measures of reform for which they stand. In other words, these societies are not merely organizations for study alone, but are primarily societies of propaganda for the practical advancement of reforms which their studies have led them to believe to be desirable. a number of cases the work of these organizations has assumed an international scope, and is of such excellence that no student of social conditions can afford to overlook Their publications in many instances constitute the most valuable body of literature in existence concerning the movements they represent.

It is the purpose of the present paper to make a rapid survey of these, as well as other agencies for the study of practical labor conditions, to show the valuable character of the work they are performing, and in general to give an idea of the character of the great movement for the improvement of the conditions of labor that is now in full activity in France.

Government Work.—Though not the most important, the work of the government should first be considered. It is now generally accepted that the state has an important part to play in the collection and diffusion of information useful to mankind. In the case of information showing the social condition of the country this amounts to a real duty. All modern governments in their administrative reports and in their periodical census enumerations publish more or less information throwing light upon the industrial situation of the country, and consequently indirectly upon the economic condition of the laboring classes. Special effort on the part of the government systematically to collect information directly concerning labor conditions, however, is of recent date.

The first effort in this direction in France was in 1891, when M. Jules Roche, then Minister of Commerce and Industry, by decree of January 22 created a Superior Council of Labor with the duty of examining and reporting upon any measure relating to the interests of labor that might be referred to it. Its character was very similar to that of the Superior Council of Statistics created in 1885, which had been so instrumental in improving and unifying the statistical work of the various departments of the government. The labor council was made to consist of fifty members, partly representative workingmen, employers of labor, and members of Parliament appointed by the Minister of Commerce, and partly members exofficio, the chiefs of bureaus and officers of organizations having to do with the economic interests of the country.

This council has been very effective in promoting and elaborating the labor legislation of recent years. Almost its first service was to recommend and secure the creation of a permanent bureau of labor investigation in the exist-

ing Office du Travail, the purpose of which is strictly similar to that of our own Department of Labor. The law creating this bureau is dated July 20, 1891, and the decree determining the details of its organization August 19, 1891. Subsequent decrees of February 4, 1892, and June 18, 1894, have changed its nature and scope to some extent.

The French labor department has done exceptionally good work among labor bureaus. Its publications now number thirty-two or more volumes, in addition to a monthly Bulletin which has been issued since 1894, and constitute the most valuable body of information concerning labor conditions in France now in existence. annual reports concerning labor disturbances show the number, character, and results of strikes each year since 1890, and the results of the operation of the arbitration act since its enactment in 1892. Its special reports concerning the hygiene and security of industrial workers, and the arbitration of labor disputes both in France and foreign countries, are the most complete compilations upon these subjects that exist. Its series of reports upon the German and Austrian systems of workingmen's insurance present valuable analyses of the statistical returns of these institutions, and its reports upon wages and hours of labor in France furnish almost the only official data concerning these points that can be had.

As originally constituted, the work of the Office du Travail was limited strictly to the collection of labor statistics. Its facilities for statistical work, however, soon led to the transfer to it of other statistical work. It thus now publishes the results of the periodical censuses, the annual statistical abstract (Annuaire Statistique), and the Statistique Annuelle, or annual returns of births, deaths, marriages, which were formerly prepared by the independent Bureau de la Statistique Générale. The labor bureau has thus, in fact, become the central or general statistical office of France.

Le Play School.—Turning now to private efforts, historically, at least, the work of the Le Play School deserves prominent mention among the organized efforts for the study of labor conditions. In 1855 M. F. Le Play published his celebrated Les Ouvriers Européens. The Academy of Moral and Political Sciences, in according to this work the Prix de Statistique, expressed the hope that a society might be organized for the purpose of continuing the study of society along the lines, and according to the methods, there laid down. The idea was eagerly taken up by Le Play; and an organization under the name of Société Internationale des Études Pratiques d'Économie Sociale was effected November 27, 1856.

The work of this society and its celebrated founder is so well known as scarcely to require extended mention. The society is strictly an organization for original research. The characteristic feature of its work is that, pre-eminently among societies for economic investigation, it stands for the necessity of the direct observation of social facts and Its efforts are directed to the accumulation of conditions. documents embodying the results of observation. As regards the method of observation, however,—and herein consists the distinguishing tenet of the school,—it believes that the best results can be accomplished by the making of detailed monographic studies of the conditions of individual but typical workingmen in different industries and industrial centres. These studies are primarily the presentation of workingmen's budgets, similar to those published by the Department of Labor at Washington, but in addition are accompanied by detailed text descriptions of all the elements entering into the lives of the persons described, and the industrial centres in which they reside. A single budget, it is held, may not be of great value; but after hundreds of such monographs have been collected, representing all trades and localities, material is afforded for a comparative study of labor conditions and needs that can be obtained in no other way.

An essential feature of its work, therefore, is the effort to form or secure the co-operation of observers in all parts of the country, and even in foreign lands. For this purpose there have been organized numerous local centres of study called *Unions de la Paix Sociale*, and prizes are given for the best monographs submitted for publication.

As regards the methods of social reform, the Le Play School is a strong advocate of the *institution patronale*, or institutions organized by employers for the benefit of their employees, which have received so great a development in France. It also encourages in every way the association of workingmen for their mutual benefit, and believes that the state should interfere only in its regulative capacity, as in the enactment of factory laws or indirectly to encourage individual and co-operative efforts.

This society has had an uninterrupted and successful history since its formation over forty-two years ago. Such men as Wolowski, Batbie, and Michel Chevalier have been its presidents. Its founder Le Play was its general secretary for twenty-six years, 1856 to 1882, since when M. Delaire has conducted its affairs with great zeal and success. The publications of the society now constitute a considerable library. The works of Le Play himself are numerous. The most important, Les Ouvriers Européens and La Réforme Sociale en France, are in six and three volumes respectively. A continuation of the former work has been published by the society under the title of Les Ouvriers des Deux Mondes. Since 1881 the society has published a bi-monthly review entitled La Réforme Sociale, which is now in its thirty-fifth volume.*

Whatever the opinion held in regard to the method of

^{*}In 1887 some of the members of the society, differing with the others regarding the character of the monographs that should be sought, withdrew and formed a separate organization. A new periodical, La Science Sociale, was started as the official organ of this society. For a description of the reasons for this division, and the difference in the methods of the two organizations, see the article, La Science Sociale, by M. de Rousiers in the Annals of the American Academy, January, 1894.

observation advocated by this society, there can be no two opinions concerning the great value of the work done by it during its long history, not only in the accumulation of information concerning labor conditions, but in the great influence that it has exerted in awakening and promoting throughout France an interest in the study of the actual conditions under which labor is performed, and the particular features in which reform was most needed.

The Musée Social. - Though the youngest of all organizations for the study of practical labor questions in France, the Musée Social of Paris easily occupies the first place as regards the importance of the work performed. There is nothing quite like this institution in any other Endowed with adequate funds, it is devoted solely to the promotion of the study of labor problems and the advancement of concrete measures of labor reform. As regards its organization and purpose, it bears, in the field of economic research, a close analogy to the Smithsonian Institution at Washington in the domain of scientific investigation. Both were founded by private individuals "for the diffusion of knowledge among mankind." Both are non-scholastic in the sense of not having regular classes of students, and both maintain a corps of experts devoted to original research and to the aid of those making similar inquiries.

It is interesting to note how largely the various international expositions of France have served as the starting-point and direct cause of much of the social work now being done in that country. The *Musée Social*, in common with a number of the other important organizations for the study of labor problems, is the direct outcome of the success achieved by the Section of Social Economy organized in connection with the International Exposition at Paris in 1889. Through the efforts of this section there was assembled a vast quantity of documents of a unique value, relating to the conditions of labor and

workingmen's institutions. They represented the original sources of information, the constitutions and reports of workingmen's aid funds or unions, the exhibits of cooperative societies, plans and models of workingmen's houses, statistics of old-age and sick-pension funds, appliances for preventing accidents, which had never before been gathered together, and could be found in no library. It seemed a pity that a collection of such valuable material should be dispersed.

Impressed with this fact, and also with the great good that could be accomplished if the exhibit and work of the Social Economy Section could be made permanent and constantly added to, the Comte de Chambrun, by a generous donation, which he afterwards increased until the total amount given exceeds two million francs, created the Musée Social. Though the creation of the Musée was definitely determined upon and announced shortly after the close of the exposition, it was not formally inaugurated until March 25, 1895. In the mean time the plans for it constantly developed, until as now organized the Musée constitutes a veritable laboratory for economic research in all fields as far as they relate to concrete labor problems. In the language of its constitution, its object is "to place gratuitously at the disposition of the public documents, with collateral information, constitutions, plans, models, of institutions and undertakings having for their object and result the improvement of the moral and material situation of the laboring classes."

To carry out this aim, the *Musée* has spared no pains or expense in the organization of every possible means of obtaining information concerning labor and labor conditions in all lands, and in facilitating its use by all those interested in matters of social reform. It is magnificently installed in a building owned by it, 5 Rue Las Cases, where it has lecture-rooms, meeting-rooms for the economic and reform societies of Paris, exhibition rooms for

the display of plans, models, and accident-preventing appliances, and, most important of all, its carefully selected library. The latter now includes over 13,000 volumes exclusively devoted to labor, and consisting largely of original sources of information, reports and proceedings of societies, social undertakings, impossible to be found in ordinary libraries. Its files include records and copies of labor legislation in all countries, or of other important labor happenings, catalogued and under the direction of skilled librarians, whose duty it is to help investigators desiring to make use of it.

The Musée is not content with bringing together the results of others' efforts. Each year it sends one or more commissions to investigate particular features of the labor problem in foreign countries. It has thus made detailed investigations of trade-unions in Great Britain, labor organizations in the United States, co-operative and credit institutions in Italy, and the agrarian question in Germany, by special delegates sent to these countries. In addition to making these special inquiries, it maintains in foreign countries special correspondents, whose duties are to supply the Musée with copies of all bills, reports, or laws concerning labor matters presented in their countries, or of privately published works concerning labor, to furnish information as called for, and to transmit annual reports giving a résumé, with documents. of the labor events, legislation, and judicial decisions relating to labor during the year.

At Paris an important branch of its work is in its service for consultations. If a body of workingmen wish to form a trade-union, a co-operative society, or an organization of any kind; if an employer desires to create an oldage pension or accident insurance fund, or to introduce a scheme of profit-sharing; if it is a question of organizing a company for the construction of workingmen's homes; or if any social work is projected,—the *Musée Social*, when-

ever requested, co-operates in every possible way. Model constitutions are prepared, the necessary actuarial calculations made, plans of houses furnished, and expert criticism and advice given regarding any points submitted to it. This service is largely made use of. The *Musée* reports that during the six months ending April 1, 1898, such assistance was rendered in 547 cases, of which 240 were written communications, and 307 oral.

Finally, by means of special donations from the Comte de Chambrun, the *Musée* offers each year a prize of 25,000 francs for the best work submitted upon an assigned subject relating to labor. The first competition, that for 1897, was on the subject of Profit-sharing, the prize being divided among three competitors, who received 12,000, 8,000, and 5,000 francs respectively. The second competition, for 1898, on the subject of Workingmen's and Employers' Associations, was likewise divided among three contestants. The subject for the competition for 1899 is Workingmen's Insurance.

Though the publication of material is not the chief object of the *Musée*, its work in this direction is of constantly increasing importance. It now issues two series of monthly *circulaires*, or bulletins, of which over fifty numbers have appeared, each of which is devoted to a single subject. The reports of its special missions to foreign countries are published as separate volumes in a series entitled *Bibliothèque du Musée Social*.

It has not been an easy task to summarize in a few words the character of the work of an institution the activities of which are so multifarious and wide-reaching. The *Musée* has as yet but barely entered upon its work. It has succeeded, nevertheless, in drawing to it, either as officers or members of its consulting staff, all those most prominent in matters of social reform. Its rooms are the headquarters of many of the most important organizations for the improvement of labor conditions, and thus it has

become the centre for the study of labor problems and of active work for their solution in France.

Société Française des Habitations à Bon Marché.—From the consideration of organizations devoted to the general study of labor conditions we now turn to the examination of the work of societies having for their purpose the advancement of reform in some particular field. Among them, that of the French Workingmen's Homes Society claims our first attention.

As in the case of the Musée Social, the organization of this society is the direct consequence of the work of the Social Economy Section of the Paris Exposition of 1889. Its purpose is to provide an organization to perpetuate the work commenced by the International Congress in Relation to Workingmen's Homes, held under the latter's auspices; to provide a body which could take the initiative in the organization of subsequent congresses; to furnish the means for the uninterrupted study of the various phases of the problem of the housing of the working classes; and, finally, and most important of all, to form an organization of those most interested in the subject for the purpose of actively intervening and bringing about the creation of companies for the construction of workingmen's houses throughout France, the enactment of necessary legislation regarding building and sanitary regulations, and the like. Though a society for study, it is none the less preëminently an organization for active propaganda.

The society was formally constituted December 17, 1889. Its field of operations as set forth in its constitution is "to encourage in all France the construction by individuals, employers, or local societies, healthy and cheap houses or the amelioration of existing buildings intended for the laboring classes. It will notably seek to make known the means necessary to facilitate to employees, artisans, and workingmen the acquisition of their own

homes. To accomplish this, it proposes to place at the disposal of individuals or societies, plans, model constitutions of recognized merit, as well as all other documents and necessary information."

It will be seen from this statement that the sphere of activity mapped out for itself by the society was that of a general bureau of information and centre of propaganda. Actual construction work, or even financial participation in building operations, is forbidden to it. Its means of action are to bring about the organization of independent building companies, gratuitously to furnish architectural plans, models of constitutions, and schemes of financial organization, to open competitive contests in which prizes are offered for the best plans for workingmen's houses, to furnish lecturers on the subject whenever any action is contemplated, and generally to assist in any other way for the advancement of the movement to which it is devoted.

This well-defined policy has been carried out with marked success. For ten years the society has labored unceasingly. From the first it drew to itself all those most competent to direct the movement for the improvement of the housing of the poorer classes. Its membership is largely composed of men actively interested in public affairs,—architects, government officials, directors of financial institutions. To a considerable extent the members are also directors of companies for the construction or renting of workingmen's houses, and are thus personally familiar with the details of the housing problem. During the decade these men have responded to scores of calls for addresses and personal help in the organization of work in different industrial centres. Hundreds of inquiries have been answered, and expert examination and report been made on plans and proposed schemes of organization submitted to it. Its quarterly Bulletin, issued regularly since its organization, now includes ten volumes of from four to five hundred pages each. Nor are these

pages devoted chiefly to addresses and academic discussion. For the most part they are devoted to the reproduction in full of the constitutions and reports of notable societies for the provision of workingmen's houses, with plans of houses and detailed statements of costs, and the financial results achieved. The files of the *Bulletin* thus constitute a storehouse of information presented in the most available way to which new companies or employers contemplating action can have recourse, not only for general information, but for that concerning the technical details, both architectural and financial, of the work with which they are concerned.

It is in its active promotion of the organization of companies for the building of workingmen's houses and the enactment of legislation, however, that its great usefulness has been manifested. Under its auspices and, as the direct result of its efforts, between twenty-five and thirty companies for the erection of homes for the working classes have been established, and are now in practical operation. When it began its work, co-operative effort on the part of the workingmen themselves to acquire their own homes was unknown. From the beginning of its operations it has been the persistent effort of the Société Française to introduce in France co-operative building associations after the English and American types. this it has been successful. Such associations have been created through its efforts in various industrial centres. new ones are being organized every year, and through them the question of workingmen's houses is entering upon a new phase.

In the field of legislation the society has been equally successful. After an exhaustive examination of the charater of the legislation that was desirable, it drew up a bill; and through its president, M. Jules Siegfried, who was also a member of the French Parliament, secured its enactment as the present important law of November 30,

This law provides for the organization of local committees in each department to investigate housing conditions and promote action, and for the encouragement of the erection of small houses by the remission of certain taxes in their case; and finally permits the Caisse des Dépôts et Consignations and certain other public institutions to use a part of their funds in loans to companies or societies for building workingmen's houses. It has also secured a very important extension of this last privilege in the law of July 20, 1895, by which savings-banks are given the same power of so investing a part of their funds. In consequence of this law the savings-banks in various cities are actively participating in the work of housing the working classes through the financial aid granted to building societies of their localities.

The society itself at the present time is in a very flourishing condition. Its membership is divided into three classes: Donation, or those buying a life membership for 1,000 francs; Ordinary Life, or those buying a life membership at the regular rate of 300 francs; and subscription members, or those paying annual dues of 20 francs. The constitution of the society provides that all receipts from the first two classes must be carried to a permanent endowment fund, the capital of which cannot be alienated. As the society secured the adhesion of fourteen donation and thirty-three life members within less than a year from its organization, a number of the donation members giving more than the required 1,000 francs, it immediately started with a considerable endowment fund. In 1894 this fund received a great addition. The Comte de Chambrun, so well known as the founder of the Musée Social, gave the society the important sum of 50,000 francs. Shortly after, Madame Cornil, through M. Jules Simon, gave a further sum of 10,000 francs. Finally, an annual payment of 3,000 francs to the society was decreed by the government to be paid from the fund created by

the Giffard legacy. In consequence of these gifts the society, in 1898, possessed an endowment of over 100,000 francs in addition to the Giffard annuity, which at 3 per cent. represents a further capital of a like amount. The society is thus upon what would seem to be a perfectly secure basis. The enthusiasm of its officers and members in its work seems to have suffered no abatement in spite of the fact that it has now accomplished several of the most important purposes for which it was organized; and it will undoubtedly continue in the future, as it has been in the past, the centre of the movement throughout France for the improvement of the housing condition of the working classes and the increase of house ownership among them.

Comité Permanent du Congrès International des Accidents du Travail et des Assurances Sociales. - Closely analogous to the work of the Society for Workingmen's Homes is that of the Permanent Committee of the International Congress in Relation to Accidents to Labor and Workingmen's Insurance. The history of this organization, as regards its main features, is almost identical with that of the former society. Both took their rise from an International Congress held in connection with the Paris Exposition of 1889. This congress was probably the most important of the many social congresses that were held at Paris in that year. The German and Austrian governments had recently taken their radical action in regard to the compulsory indemnification of laborers for accidents, and the subject of accidents to labor was everywhere on the Continent receiving wide-spread attention. This congress succeeded in gathering together the officials of insurance institutions of all the countries of Europe; and the discussions that followed, with the publication of the reports that were presented, marked an epoch in the study of the question.

The advantages resulting from this comparative study

of a problem common to all the countries were so manifest that at the conclusion of the congress it was decided to effect a permanent organization. This was done by the election of a "Permanent Committee" with representatives from all the countries taking part in the congress, but with permanent headquarters at Paris. The appointment of this committee resulted in the organization of a strong society in fact, if not in name; for adherents whose dues would support the organization were sought, and were almost immediately obtained to the number of a thousand or more. The income derived in this way, in connection with various gifts, has enabled the committee to carry on its work in a most effective way.

From the start this committee took rank as the central bureau of information concerning all matters relating to accidents to labor and workingmen's insurance. its most important duties was to look after the organization of subsequent congresses and serve as the connecting link between them. This it has done in bringing about and managing the very successful congresses at Berne in 1891, Milan in 1894, and Brussels in 1897. Beginning with the year 1890 it has regularly published a quarterly Bulletin of from seventy-five to one hundred pages, in which are given not only studies of particular insurance questions, but the reproduction of all important legislation or official reports. The reports of the congresses and the files of the Bulletin at the present time constitute a library of thirteen large octavo volumes, and present the most valuable body of literature relating to the question of accidents to labor and workingmen's insurance that exists in any language. The congresses have uniformly been attended by the leading officials of insurance bureaus and companies, and it is difficult to overestimate the influence that they and the work of the Comité Permanent have exerted in diffusing information and bringing about right thinking upon the very complex problem with which they are concerned.

Société pour l'Étude Pratique de la Participation du Personnel dans les Bénéfices. - What the organizations that we have been considering are for the study and development of work relating to the housing of labor and workingmen's insurance, the Society for the Practical Study of Profit-sharing is for the investigation and advancement of the cause of co-operation and profit-sharing. This society, usually known under the shorter title of Societé pour la Participation aux Bénéfices, is now in the twenty-first year of its existence, having been organized in the year 1878. The important feature of its work is that, though an organization for investigation and study, it is distinctly and avowedly a society of propaganda. Its membership is largely made up of officers of enterprises which are themselves practising profit-sharing. Its founder, president, and guiding spirit during the two decades of its history, M. Charles Robert, is the director of one of the most important insurance companies of France, and one which shares its profits with its employees. Its secretary, M. Albert Trombert, is the administrative head of the famous Chaix Printing House, likewise an important profit-sharing concern.

The principal means of action possible to the society has necessarily been that of education, the making known the extent to which the system of profit-sharing is practised, and the various forms under which it can be organized. Beginning with the year 1879, it has, therefore, published a quarterly Bulletin of about fifty pages, which is devoted to the description and critical examination of the most important examples of profit-sharing enterprises. In addition to this regular organ of the society, it has also undertaken or assisted in the publication of various other works relating to the question of profit-sharing. Chief among these must be mentioned the annual issue of the Almanach de la Co-opération Erançaise, giving a list of profit-sharing concerns in France, the dates of their or-

ganization and certain other important facts concerning them; the translation by M. Albert Trombert of Dr. Victor Böhmert's classic work on profit-sharing; and two other works, also by M. Trombert, entitled Guide Pratique pour l'Application de la Participation and Les Applications de la Participation aux Bénéfices, which is intended as an appendix to Dr. Böhmert's work, giving an account of more recent profit-sharing enterprises.

This society has thus since its formation been the centre of all work and study in relation to profit-sharing and cooperation. At the present time it is apparently in a flourishing condition. It has an active though limited membership, and is now in possession of invested funds amounting to over 50,000 francs. Whatever one's opinion may be in regard to the advisability or practicability of profit-sharing schemes, there can be no divergence of opinion regarding the benefits that have resulted to economic science through the continued examination by this society of the results achieved under this system of industrial organization.

With the consideration of the work of this society we must close our account of the organized efforts now being made in France for the study of practical labor problems. As indicated by its title, the scope of this paper does not include a description of the general study of economics in France, but only that having to do directly with the examination and solution of what are called practical labor problems. No attempt is therefore made to describe the scholastic instruction of political economy or even the work of such organizations as the Académie des Sciences Morales et Politiques, the Société de Statistique de Paris, interesting though their work may be. There still remain, however, a number of general points, characteristic of the work of all the organizations considered, that should be brought out.

They constitute, indeed, the most significant and interesting features of the whole movement.

First of all, it is important to seek the explanation for this wide-spread interest and activity in matters of labor reform. The Paris Exposition, through the great impetus given by its Section of Social Economy to the study of economic condition, marks the beginning of the movement; but some deeper reason for its success must be sought than in its inspiration.

This explanation can be found in the clear recognition on the part of the thinking classes of France of the significance of the growing movement towards socialism and state action on the Continent. The upper classes, or at least those who have the welfare of the people earnestly at heart, have become thoroughly aroused to the fact that something must be done to remedy existing hardships if the march of socialism is to be arrested. It is seen that this can only be accomplished by the practical demonstration that the condition of the laboring classes can be materially improved under the existing industrial system, and through the voluntary efforts of the people them-This, then, is the real reason, apart from the general desire to improve conditions, for the great efforts being made by employers of labor and public-spirited associations for the advancement of measures of labor Though rarely so stating their object, the organizations that we have been considering are fighting the battle of individualism against socialism, of evolution against revolution. No better example of this could be given than the remarkable efforts which have been made within recent years for the development of workingmen's insurance institutions under private auspices in the hope of demonstrating that it is not necessary to resort to systems of state insurance similar to those of Germany and Austria. Large employers of labor all over France bave created insurance funds for their employees; and the

national associations of iron and steel and textile mill owners, each including scores of firms, have organized at their own expense model organizations for the insurance of employees in those trades. It was undoubtedly due to the existence and work of these institutions that the compulsory compensation act recently passed did not also include some system of state or other form of compulsory insurance as well.

In line with these views it is important to note, as the second point to which it is desired to direct attention, that in the case of all the organizations described a resort to state action is strongly opposed. When legislation has been sought, it has been of a permissive character, its purpose being generally to give freer scope and encouragement to private action. This may be a surprise to some. We are accustomed to look upon the French as a people who resort easily to state action for the solution of stubborn social problems. Yet in no country is the demand for state action more stubbornly resisted. Certainly nowhere is there such a unanimity of opinion among economists and those interested in measures of social reform against such action. Not only is the spirit of individualism naturally very strong in France, but it is recognized by the intelligent classes that the French bureaucracy is not the effective instrument found in Great Britain and Germany, and probably could not be made so. So strong is this feeling in France that it is not rare to meet those who fully indorse Mr. Spencer's Coming Slavery, and are opposed to even the slightest factory regulations.

Finally, as the third point, we should observe the character of the men who make up the membership of these organizations for reform, or at least constitute their working force. To one who has had the good fortune to meet many of the men at the head of these societies, and to some extent become familiar with their work, no fact is more strikingly impressed upon him than that these men



are but in exceptional cases primarily teachers of economics. For the most part, they are men of affairs, actively engaged in industrial and official work. They are the directing heads of large manufacturing and commercial enterprises, insurance companies and banks, the chiefs of bureaus and departments of the government, the editors of newspapers and reviews.

Thus, as we have seen, the president of the society for profit-sharing, M. Charles Robert, is the manager of a large insurance company; and the secretary of the society. M. Trombert, is the head of an important publishing house. In the society for workingmen's homes the honorary president was formerly M. Jules Simon, and is now M. Jules Siegfried, who, like his predecessor, is an excabinet minister and is now a member of the French Senate; the administrative president is M. Georges Picot, the permanent secretary of the Academy of Moral and Political Sciences; the vice-president, M. Émile Cheysson, is the inspector-general of roads and bridges; and the general secretary, M. Fleury-Ravarin, is a member of the present Chamber of Deputies. At the head of the permanent committee of the congress in relation to accidents to labor and workingmen's insurance is M. Linder, the inspector-general of mines of France. The vice-presidents are MM. Darcy and Ricard, the former the president of the national organization of coal mine operators in France, and the latter a former cabinet minister and now in the Chamber of Deputies. The general secretary and active manager of the affairs of the committee, M. Gruner. is the secretary of the organization of coal mine operators above mentioned; and his assistant, M. Bellom, is an engineer in the state corps of mines.

It would be possible thus to run through the list of the active members of all of these organizations, and show to how large an extent they are directly associated in some way with enterprises which bring them in actual touch with the conditions which they are seeking to ameliorate. It is hardly necessary to comment upon the significance of this feature of the work we are considering. Whatever may be her failings in other respects, France has succeeded in securing the active interest and assistance of her best business men in measures of labor reform; and the movements with which they are identified are making rapid progress. Could the United States obtain a similar co-operation, the reproach that economists are mere theorists would pass away, and the cause of industrial reform would take a great step forward.

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THE GAS SUPPLY OF BOSTON.

III.

In the preceding article I set forth the brilliant financial success of the Bay State Company, and intimated that so great a success must invite attacks along at least two distinct lines. In the first place, in view of the strenuous efforts for years to regulate the companies in the interest of the public, such a career as that of the Bay State Company was likely to create a demand for increased legislative and administrative control over the companies. In the next place, it was almost certain to bring about attempts on the part of investors to wrest some of the large gains of this field from the Bay State Company by means of competition.

The relation of one of these possible attacks to the other would be affected by the particular circumstances at the time, and partially, also, by the character and temperament of the persons leading the attack. happened, the political conditions in 1892-93 invited an attack. A small group of well-educated, intelligent, and ambitious young men then completely controlled the Democratic party in Massachusetts. In January, 1893, one of these entered upon his third term as governor of the State; a second, Nathan Matthews, Jr., began his third term as mayor of Boston; while a third held a high federal office at Washington. The Democratic party was in high hopes of continuing and extending its power in the State. In that case, Mayor Matthews was looked upon as the logical successor of Governor Russell. would have been strange, therefore, if so keen a political leader had not been on the lookout for an opportunity to show himself a defender of the rights of the people. The

* Published in this Journal for October, 1898.

preceding narrative will have made it clear what an opportunity the gas situation in Boston offered at this time for a striking political move.

The particular occasion for action came from the fact that the five-year contracts for the public lighting were to expire July 1, 1898. In addition the amendment of the city charter in 1885 largely centralized power in the hands of the mayor. Mayor Matthews interpreted this concentration of power to extend to the right of inducing competition in the Boston gas field without the consent of the board of aldermen. Political conditions and legal technicalities have prevented a judicial determination of this doubtful point. As the sequel will show, competition was actually introduced in this way. It is plain that, if the mayor could maintain his view (as he proved able to do), nothing but a sense of financial danger on the part of the Brookline Company would prevent him from getting that company to precipitate a great gas war by paralleling the pipes of the Bay State Companies.

The Brookline Company was the only one both physically and legally in a position to be used for such a purpose. The town of Brookline is almost completely surrounded by Boston. This company under its special charter, as amended from time to time,* had the right to lay pipes in the city of Boston with the consent of the proper local authorities. At the beginning of 1893 it was the only company operating in the town of Brookline and in those portions of Boston which, before annexation,† had constituted the town of Brighton and part of the town of Brookline, as well as in a small portion of the Back Bay District of Boston. Since 1873 it had furnished some public lights in Boston, and since 1875 all the public gas lights in the territory traversed by its

^{*}Acts of 1853, c. 17; of 1854, c. 104; of 1860, c. 151; and of 1870, c. 180.

[†] Brighton was annexed in 1874 (Acts of 1873, c. 303), and portions of Brookline at two different times (Acts of 1870 and 1874.)

pipes. The contracts for this public lighting had been expressly authorized by the Boston board of aldermen.

As already indicated, all the companies of the Bay State group, and also the Brookline Company, had, with the consent of the mayor and aldermen, obtained the right to enter Boston and to occupy certain designated streets, or, as in the case of the Bay State Company, all the streets of the city. Before 1885 gas pipes were laid in Boston by companies already admitted to the city without any permit of the superintendent of streets; but since 1885 streets had been opened by the lighting companies only under written permits from that officer, designating the particular streets to be opened.

The act of 1854, by which the Brookline Company first entered Boston and Roxbury (not then annexed), gave the company specific authority to lay pipes in any parts of these cities, with the consent of the mayor and aldermen in each case. By this act the mayor and aldermen of each city were given the right "to regulate, restrict, and control the acts and doings of said company, which may in any manner affect the health, safety, or convenience of the inhabitants." By a later statute, enacted under the reservation in 1830 of the right to repeal charters, all gas companies chartered by special act since that date are made subject to the general laws. The general incorporation law (Acts of 1870, c. 55, § 56) authorizes any gas company to dig up and open streets with the consent of the mayor and aldermen, so far as is necessary to accomplish the objects of the corporation. By § 57 of this act the mayor and aldermen of any place in which the pipes or conductors of such corporation are sunk are given the same right of regulation and control over the corporation as the mayor and aldermen of Boston and Roxbury were given over the Brookline Company in the provision quoted above.

To add to the confusion already existing, the act

amending the charter of Boston * provided that the executive powers heretofore vested in the board of aldermen should be vested in the mayor, to be exercised by him through the several officers and boards of the city: and it prohibited, in express language, the board of aldermen from taking part, "directly or indirectly," in the conduct of any of the executive or administrative business of the city. In 1892 the ordinances of the city underwent a complete revision. There is no reason to suppose that the revisers had specifically in view the gas situation, with the impending conflict. Yet the revision, made under the direction of Mayor Matthews, accentuated the characteristic features of the charter amendment of 1885, concentrating power in the hands of the mayor. Three sections of the revised ordinances deal chiefly with the powers of the superintendent of streets in regard to laying gas pipes and similar conductors. The first t authorizes him to issue permits to open the streets "to persons having authority in the premises." The second provides that such permits shall be subject to all the terms, limitations, and conditions stated in the ordinances of the city, and also "to any permission, control, regulation, obstruction, or revocation which the board of aldermen may make." The third provides that he shall issue such permits "when authorized thereto" by an order of the board of aldermen.

As if the situation were not confused enough already, the act of 1885 creating the Gas Commission, one of the chief objects of which was to prevent competition, provided that

in any city or town in which a gas company exists in active operation, no other gas company, nor any other persons, shall dig up and open the streets, lanes, and highways of such city or town for the purposes of laying gas pipes therein, without the consent of the mayor and aldermen or selectmen of such city or town, after a public

^{*}Acts of 1885, c. 266, §§ 6 and 12. †C. 36, § 8; c. 5, § 1; c. 36, § 14.

hearing . . . and notice to all persons interested, by publication, or otherwise.

Another section of the same act gives the right to any person aggrieved to appeal from such decision of the mayor and board of aldermen to the board of gas commissioners.

Evidently, the question by whose authority the Brookline Company might compete with other companies in Boston was a very doubtful and a highly complex one. The doubts did not seem, however, to appall the mayor of Boston, who settled them, temporarily at least, in his own way, and admitted the Brookline Company as a competitor by the mere permit of his superintendent of streets.

I called attention in an earlier part of this discussion to the fact that the progress of science opened the way for the Bay State Company to get into Boston, under the plea of cheaper gas by means of the new process for making water gas instead of coal gas. The moment water gas was seen to be the successful rival of coal gas, it also became clear that the degree of saving by the change depended in large measure on the price of naphtha, which is required in large quantities to enrich water gas. But the Standard Oil Company has had for years a virtual monopoly* of the naphtha market of the United States. The development of the water gas industry offered, therefore, a large and tempting new field of investment for persons connected with that company, placing them in a position to bring pressure to bear on the owners of water gas plants everywhere to sell out. The history of the gas industry for the last dozen years shows that those interested in the Standard Oil Company were quick to take

*It is true that, during the years of conflict, the companies in which Mr. Addicks was interested bought their naphtha, for the most part, from another oil company. It was probably this demand alone that kept that company going. It is perhaps needless to suggest that the difficulties of procuring naphtha placed the Addicks companies at a disadvantage.

advantage of the situation. One by one, many of the larger gas companies of the country have passed into the control of persons closely connected with the oil monopoly.

It would be strange if this freezing-out process had not at certain points met with violent and bitter opposition. One of the most severe struggles of this kind took place in Brooklyn, New York. For months before the period of which I am now writing, a desperate gas fight had been going on there with the interests represented by Mr. Addicks of the Bay State Companies. The same parties were in conflict in Buffalo; and Mr. Addicks had just retired from still another field, Chicago, very much richer than when he went in. Such conflicts never fail to engender keen business and personal animosities. conversant with the business methods of the Standard Oil magnates, it need scarcely be said that, if occasion offered, they would not be slow to strike a blow at Mr. Addicks, and notably in his stronghold, Boston,* where circumstances were fast making his position untenable even without such a direct attack.

The special report presented by the Gas Commission, March, 1892, declaring that gas could be furnished in Boston proper for \$1 per 1,000 feet at a profit, not only called attention to the richness of the field, but also furnished the basis for increasing public hostility against the Bay State interests, and opened the way for attacks from various sources. The first persons to take advantage of this situation were the large consumers, mainly hotel keepers, who had been deprived in 1891 and 1892 of the special discounts to which they had become accustomed. These formed an association, and raised funds to pay counsel to prosecute a petition before the Gas Commission for dollar gas. This petition was presented on June 4, 1892; but after several public hearings the

^{*}Cf. Investigations of 1893, pp. 314 and 365.

case was compromised. The company agreed: (1) to furnish gas of 25 candle power; (2) to sell to large consumers for \$1.20 per 1,000 feet for illuminating purposes; and, finally, (8) to furnish to all consumers, through an independent, rent-free meter, gas for other than illuminating purposes at \$1 per 1,000 feet.*

The vigorous and aggressive young mayor did not appear publicly in the struggle until the beginning of his third term and the meeting of the legislature, early in January, 1893. But as early as June, 1892, the Boston Post, at that time a leading Democratic paper of New England and the recognized organ of the city administration, began a violent and persistent attack on the Bay State Gas interests. The two chief cries were, "Down with the Gas Trust!" and "Give us dollar gas." The mayor in his inaugural address, January 2, 1898, gave first place to public lighting; recommended a reduction of \$65,000 in the annual appropriation for the lamp department; and, to use his own words, gave notice "that the gas companies must come down."t demand was abrupt; and the mayor testified later that he had conferred neither with the old company nor with any prospective competitor, and indeed had not previously given thought to the gas situation. neglect is difficult to understand, in view of his two years of public service and of the constant discussions in the newspapers and in the Gas Commission reports. At all events, not till after this first move, did he make any attempt to consult with the gas companies. On January 27 he made a request to see the president of the gas company. ‡ A subordinate who came to see him (the president being absent from the city) was informed that the mayor wished to confer with the president, if he was prepared to make a reduction in the price of gas; other-

^{*} Eighth Annual Report of the Gas Commission (1893), pp. 13, 14.

wise, "he need not come." This ended all attempts to come to terms with the Bay State interests. On January 31 the reduced appropriations passed the councils, and in due time received the approval of the mayor.

From that time the fight for dollar gas to private consumers, with a great reduction in price for the public lighting, was recognized as the mayor's fight. On January 30 he sent an official petition to the legislature. In this he set forth that Boston paid more for its public lighting than any other large city in the country; that it could not charge rent for the use of the streets, nor collect proper damages for injuries to the streets nor adequate taxes upon the capital of the companies; and that by the municipal lighting act of 1891 the city was deprived of the right to construct its own lighting plants, and, in general, that under existing laws the city could not obtain light at reasonable prices. He prayed relief from each and all of these evils, and presented seven separate bills designed to remedy them. These and many similar bills, some of which bore the name of the mayor and some not, were energetically pushed by him and his friends throughout the session, until the desired end was accomplished.

To leave no stone unturned, the mayor, on February 8, filed three separate petitions with the Gas Commission. The first set forth that the Bay State Company sold gas to the companies under its control at an unreasonably high price, and asked the board to order the price reduced. The second stated that all the companies in the Bay State group were virtually one company, and asked the board, on the strength of its own findings in the special report of 1892, to order the price of gas of all these companies reduced to \$1 for private consumers, and 80 cents for the city of Boston. The third asked, separately, that the Boston Company be ordered to sell gas to the city at 80 cents, and to private consumers at \$1.

The requests for a reduction of price for gas for public

lighting in the case of all the companies was afterwards waived by the petitioners and not considered by the board. Separate hearings were held on the petitions against the Boston Company. But little new evidence was offered in either case, the petitioners resting their claim and arguing their case almost entirely on the basis of the facts and conclusions of the report of 1892. In regard to the case of the Boston Company the commission remarks,* "at the hearings an effort was made by the company to control in some measure the facts and conclusions of the report, but, in the opinion of the board, without success," and adds that later reports of the company made to the board "give no reason for a modification of the conclusions of that report."

On February 14 the board voted to advertise the necessary hearings on the petitions against the Boston Company for March 7. The hearings were begun on that day, and by agreement of counsel, continued until March 21; and then, not being completed, they were still further continued until the 23d, when they were closed. board then took the case under advisement, and on Saturday, the 15th of April, near the close of office hours, voted to recommend that after May 1, 1893, the price charged by the Boston Company be not more than \$1† per 1.000 feet, net. The following Monday morning, before notice to the company, but after the decision had in some way become known to the public, upon its own initiative the board reopened the case, and amended this vote by striking out the word net. Neither the reasons for the adjournment of the hearing from March 21 to March 28 nor for amending this vote are matters of rec-

^{*}Ninth Annual Report (1894), p. 12.

[†]This recommendation was formally accepted by the company April 22; and Boston had dollar gas, but no peace. The cases of the minor companies were not decided until June 6, when the outcome of the main agitation was reasonably certain. The commission reduced the price for the Roxbury Company to \$1.20 and for the Dorchester and South Boston Companies to \$1.30 per 1,000 feet, net, after July 1, 1893.

ord. It goes without saying that the amended vote was less favorable to the company than the original one. On February 8, the corporation counsel of Boston had addressed a request to the commission for an early hearing on the mayor's petitions. The fact that no action was taken on the petitions until eleven days after they were filed, that the commission gave three weeks' notice of the hearings instead of the minimum notice of two weeks, and that, in all, it took about ten weeks to dispose of this important case, was made the occasion of violent and bitter attacks, not only on the integrity of the members of the board, but even on the very life of the commission itself.

In fact, before this time the agitation had become so powerful as to affect the most conservative elements of the community, and, notably, the most staid of the newspapers, which declared that the Gas Commission, having all the facts in its possession, was delaying matters voluntarily. But, in spite of the agitation, the commission could not order a reduction of price except on petition; and this was the first petition of the kind it had had an opportunity to act upon. Furthermore, it could not, as the public was made to believe, even upon petition order a reduction in price upon the basis of its own ex parte findings in the special report of the year before. The law required that the company be given an opportunity to be heard. The time taken to try and to dispose of a case of this magnitude was not excessive, nor would it have been so considered in any ordinary condition of the public mind.

But, even before the petitions had been filed with the commission, the main fight had been transferred to the legislature. All sorts of bills hostile to the companies had been introduced, including a bill for the forfeiture of the charters of all the Bay State Companies, unless they cut themselves off entirely within six months from

any connection with extra-state corporations. Several of these bills were well advanced, and public hearings on at least eight of the mayor's bills were announced before March 14.

Mayor Matthews, however, had no intention of stopping with appeals to the legislature and the Gas Commission. Early in February, while his petitions before both these bodies were still pending, he entered into negotiations with the president of the Brookline Company with a view to persuading him to compete with the Bay State Companies, on the basis of \$1 per 1,000 feet to private consumers, and a figure not specifically discussed, but lower than this, for the public lighting. The willingness of his company to compete on this basis was signified, provided that the city were districted for the purpose in a way advantageous to the company; and it was stated that one of the magnates of the Standard Oil Company was ready to back the Brookline Company in such an enterprise.*

On February 13 advertisements for the public lighting of Boston were published in both the New York and the Boston papers. Bidders were "requested to state the price per thousand cubic feet at which they will furnish gas to others than the city." The exact boundaries

*It is impossible to say at just what date the Standard Oil interests acquired control of this company. On June 30, 1892, five-sixths of the stock was held in Massachusetts; while one year later four-fifths of it was held outside the State. Negotiations for the control began on January 13, 1893, by an offer to retain the president of the company in office at an increase of 50 per cent. in salary, without asking anything from him in return. On February 13 it was rumored that the control had actually passed. On the 26th the Standard Oil people appeared at the conference with the mayor, as chief owners. The transfer books show that on April 28 Mr. H. H. Rogers and three of his friends owned 4,574 out of a total of 7,500 shares. Of course, they may have controlled the situation much earlier by options on the stock. Some years before, the stock of this company had been offered to Mr. Addicks en bloc at \$115 per share. The new owners bought it piecemeal, at \$116, for the specific purposes of the contest.

For the methods and motives of the different parties for entering upon and bringing about this competition, see *Investigation of* 1893, pp. 312, 324, 363–365, 377, 419, and 428, and Appendix, p. 145.

suggested by the president of the Brookline Company were not followed, but bids for each of nine separate districts bounded by arbitrary lines were called for. Two of the districts covered the territory of the Boston Company, while four more consisted for the most part of regions served by the minor companies of the Bay State group. One district (number 5) consisted wholly of Brighton, served exclusively by the Brookline Company. This division into districts made it possible for the Brookline Company to bring in all the evils and reap any possible benefits from competition, without going to the expense and incurring the risk of piping the whole The Brookline Company, as a matter of fact, put in bids for the Brighton District at \$1.25 per 1,000 feet for public use and \$1.50 per 1,000 feet to private consumers; and for districts numbered 2 and 3, city proper, south part, and the Roxbury District (consisting of the richer portions of the territory served by the Roxbury Company), the prices were: for the city, 70 cents per 1,000 feet; and for private consumers, \$1. While not putting in formal bids for other districts, the company gave notice, with its bids, that, if the city wished, it would include at the rates of 70 cents and \$1 (as soon as pipes could be laid) all the territory served by the Bay State Companies with the exception of a district made up of the poorer portions of the territory of the Roxbury Company and of the territory served by the little Jamaica Plain Company. No reference was made in the bids to districts numbered 7 and 9, consisting entirely of East Boston and Charlestown, since nature had made these districts difficult of access for the Brookline Company.

The companies in the Bay State group put in separate bids, but only as a matter of form * and as a basis for

^{*}It is probable that these companies would have put in serious bids at reduced prices, even at a great sacrifice, had they not been advised that they could keep all competing companies out by existing legal means. As will be shown later, after exhausting every possible legal resource, they had to submit

future argument; for they ignored entirely the districts as marked out in the advertisements, making the bid of each company cover the territory already supplied by it, and made no reference to anything but public lighting. With each bid they gave an alternative by which the company should assume entire charge of caring for, lighting, and extinguishing the public lamps. would have enabled the city virtually to abolish its lamp department, which cost the city at that time about \$50,000 annually. Mayor Matthews admitted * that this department cost Boston more than twice as much per lamp as other cities paid private corporations to do the same work, and that Boston was about the only large city that did the work under public direction. But he defended the maintenance of the department on administrative grounds, irrespective of expense, and was publicly charged t with maintaining it at the expense of the city, "to save for himself one hundred thirty odd political votes."

The bids were opened on Friday, the 24th of February. The contracts with the Brookline Company were drawn the next day, and on Sunday, the 26th, submitted to the mayor. Not satisfied with the surplus earnings clause, he asked for and obtained a conference ‡ the same evening with the representatives of the company. The terms of the contract were agreed upon at this conference, and the contracts signed the following day, February 27, 1893.

The contract covered only the three districts for which

to the competition of the Brookline Company. The area of competition constantly spread, until in June, 1895, the Brookline Company supplied gas in every part of Boston except East Boston, Charlestown, and Jamaica Plain.

^{*} Investigation of 1893, p. 394.

[†] Ibid., p. 342.

[‡] According to the testimony of the mayor, he first consulted with representatives of the Standard Oil interests in regard to gas matters at this meeting, where they appeared as actual owners of the Brookline Company. Circumstances would seem to indicate that he counted on their support at a much earlier date, although he may not have consulted them personally. *Investigation of* 1893, p. 362.

the company put in formal bids, - namely, Brighton (noncompetitive), city proper (south part), and the Roxbury District,—and at the respective prices named in the bids. The term of the contract was fixed at three years from July 2, 1898 (subject to annual appropriations); but it was to continue at the same prices, at the option of the city, until abrogated by the written notice of the superintendent of streets, with the approval of the mayor. company agreed to connect its pipes with the existing public lamps without expense to the city. The contract forbade the company to disturb any asphalt, stone, or brick pavement with concrete foundations, and bound it to make all needed repairs on streets within a year after opening them, provided that the defects, in the opinion of the superintendent of streets, were due to the action of the company. The expense of laying and keeping in repair any additional service pipes fell upon the city. The city had also to bear half the expense of removing and cleaning the burners once a year.

This is probably the first American contract for public lighting which binds the company to fixed prices to private consumers. It is also one of the first contracts under which gas sold to the city by meter for purposes other than street lamps is charged at as low a price as the gas for street lamps. Before this Boston had paid annually from \$30,000 to \$40,000 per year for gas for public buildings at the rates paid by private consumers. The mayor took great pride in both these provisions. was, however, article 14 of the contract for which he took the greatest credit. This provided that the company should pay to the city each year one-half of its net earnings "after paying an annual profit of 8 per cent. on the actual money invested in that year in its gas plant,* which amount at present is taken to be one million dollars, provided that said profits shall be reckoned as cumulative from the date hereof." The article is vaguely

* The italice are not in the original.

phrased, and is practically meaningless, especially in view of the other conditions of the contract; and nothing has ever come of it.

Some figures and facts in regard to the history and operation of the Brookline Company should be given to show the remarkable character of this contract. The company had recently reduced its price, and was selling 65,000,000 feet of gas annually at \$1.90 net per 1,000, with a manufacturing and distributing cost (apart, of course, from anything for dividends and interest) of \$1.138 per 1.000 feet. It supplied a residence district so sparsely settled that, with half the length of street mains of the Boston Company, it sold less than onetwentieth as much gas, the sales per mile of main being in the one case 880,000 feet, in the other 10,406,000 The Brookline Company was paying 7 per cent. dividends on a share capital of \$500,000, and carrying a debt of \$564,000 at an average rate of about 5 per cent. At first blush, it would appear that the outcome of a struggle between such a company and as strong a combination as that controlled by Mr. Addicks could not be doubtful. But, if we go a little more deeply into the character and motives of the owners of the Brookline Company, the issue is not so certain.

The real significance of the invasion of the Boston field was brought out by the Gas Commission itself in a decision which, though made some months later, may be referred to at this point. It was inevitable that the contract should get the company into trouble with its customers, both public and private, in the non-competitive part of its territory. On the very day the contract was signed the company gave notice that it would reduce its prices in Brookline to the level charged in the Brighton District under the contract (\$1.50 for private consumers); yet petitions were filed almost immediately with the Gas Commission, asking that prices in Brookline and Brighton

be reduced to the level of those charged in Boston proper. On August 3, 1898, the board fixed \$1.40 as the maximum net price to be charged by the company in any portion of its territory. It found, among other things, that the cost of the company for management and leakage was high, and that it "had apparently been burdened through a considerable portion, of its history by a lack of economy in its management." \$1 per 1,000 feet was declared to be less than actual cost, leaving nothing for dividends and interest. On the question whether the Boston contract gave evidence that the company could sell gas profitably at any such price, the commission remarked that "it is well understood that, in the management of corporate enterprises at the present day, profits are often made by parties interested in other ways than directly, by the sale of their products in the open market"; and, again, that "the only fair inference to be drawn from the position of this company in this contract in respect to price is simply that the shareholders, or a majority of them, are willing to enter upon an experiment which they expect will, in some way, that will not appear on the face of the transaction, indirectly become profitable to them."* Could the commission have made it clearer that, in its opinion, the object of the Brookline Company was not to make money by selling gas, but to gobble up the Bay State Companies?

The very day the contract with the Brookline Company was signed the mayor sent a special message,† with a copy of the contract, to the council, stating that the necessary permits to open the streets had already been given to the Brookline Company. The message began with the statement that "the desire‡ of the people for

^{*}This decision was rendered after the legislature had adjourned, and the public agitation had ceased. Ninth Annual Report, pp. 29, 30.

[†] Boston City Document No. 65, 1893.

[†] The people of Boston may have been consumed by a desire for dollar gas, but their desire had never been ardent enough to induce them to push a peti-

dollar gas is about to be realized, at least so far as certain sections of the city are concerned," and went on to state that the signing of this contract was conclusive evidence that the other companies could furnish gas at the same prices with a profit. It demanded that the Gas Commission no longer hesitate to order reductions elsewhere, and closed with the warning that the possibility of getting as good terms from the other companies "will depend largely upon the support given by the public to the lamp department and the mayor." The activity of the mayor was marvellous. Within a period of about a week he argued the petition against the Boston Company before the Gas Commission; made another argument before the same board in opposition to the appeal of the Boston Company, against the right of the Brookline Company to lay pipes in Boston without the consent of the board of aldermen; and had an order passed through the House of Representatives, on March 28, for a thorough investigation of the whole history, life, and relations of all the Bay State companies by a special committee of the House.

This investigation, although nominally under the auspices of the legislature, was in reality a move on the part of the mayor of Boston. He alone, therefore, unless the thing were to become a farce, had to raise the money necessary to pay counsel and expert witnesses, and to defray many incidental expenses. On April 3, two days before the investigation began, the board of aldermen, by a vote of 9 to 8, refused to concur in a vote of the common council appropriating public money to pay the expenses of this "prosecution." The next day the mayor asked Mr. George Fred Williams—one of the party

tion for that purpose before the Gas Commission, which (deprived of the right of initiative in such cases) had full power, after such a petition, to procure dollar gas, and which had committed itself on the point nearly a year before.

^{*}Mayor Matthews has always insisted that, in essence, this was not an "investigation," but a "prosecution" of the Bay State Company for the forfeiture of its charter.

leaders referred to in the beginning of this article — to act as voluntary counsel without any guarantee of pay. The mayor (although summoned as one of the chief witnesses by the companies) acted as chief counsel for the prosecution; while Mr. Williams, yielding to his entreaties, acted as junior counsel. Mr. Williams stated to the committee that he acted without any assurance of pay, but that he expected compensation from the city. It was repeatedly said during the investigation that interested parties would meet the whole expense of the investigation, so far as the city failed to appropriate money for the purpose.*

This investigation occupied the chief place in the public press and in the public mind from April 5 to May 28, when the report was made. The committee, which had all the powers of the legislature to compel the attendance of witnesses and the production of books and papers, made the most thorough legislative investigation ever made in America into any industrial enterprise. I account for this from the fact that so much accurate scientific material was on record with the gas commissioners that any attempt to conceal anything else would have been useless, even though successful. The committee is supposed to have got at the intimate history of all the extra-Massachusetts Bay State enterprises with a single exception; namely, the history of the Beacon Construction Company. For some reason the representatives of the companies, while voluntarily furnishing apparently everything else desired, persistently refused to reveal the doings of this company, which built the works of the Bay State Company in Boston.

The method of conducting the investigation was, for a legislative committee, very formal, though, of necessity,

^{*}Cf. Investigation of 1893, p. 314. It appears, however, that on May 19, 1893, Mr. Williams, in the name of his law firm, drew from the city treasury for services and expenses in this case \$5,205.96. I have been unable to find a record of any appropriation for this purpose; nor do I know on what authority the money was paid, or against what fund it was charged.

it lacked the rigidity of strictly judicial procedure. companies undertook to introduce but little evidence, resting their case rather on the supposed legality of the facts produced by the other side. The "prosecution" had to depend largely on the official information in the hands of the Gas Commission. When either side wanted to introduce anything in evidence, it got it before a public session of the committee and into the hands of the reporters before the committee decided on its admissi-The question of whether or not it was admitted as evidence after that was unimportant, since the final issue here depended on popular opinion as expressed by the legislature. The committee itself was influenced quite as much by what was ruled out as by what was admitted. In addition to the report of the committee, which, together with the testimony, made a printed volume of more than one thousand pages, Mayor Matthews published a large pamphlet of the proceedings before the committee, consisting largely of matter excluded by the committee.

The most hotly contested point, and the one of the most far-reaching consequence, was whether or not the sworn returns of the companies in possession of the Gas Commission were public records, and consequently open to the public. There was no question of the right of the committee and counsel, on both sides, to have the information contained in these returns; but the commission, in accordance with the opinion of the attorney-general, had always considered these reports as containing the business secrets of the companies, which were given to the commission to enable it to perform its official duty, and had not opened the individual returns indiscriminately to the public. Counsel for the prosecution declared the returns public records, and from the beginning evinced a determination to place them at the disposal of the press.

This divergence of view produced constant friction between counsel and the gas commissioners, finally cul-

minating in the refusal of Mr. Barker, the senior member of the commission, to allow Mr. Williams access to certain elaborate calculations on the cost of making gas. calculations, made by the commissioners themselves after the returns came in from the companies, were recorded on a page in the return especially prepared for that purpose. When the matter came to an issue, Mr. Barker removed from a certain return the leaf containing these calculations before handing the return over to Mr. Williams. Mr. Barker was at once accused of mutilating a public record to protect the Gas Trust. The Post had for months before this demanded the abolition of the commission or the dismissal of the commissioners. All the other papers, except the one owned by the gas interests and the Journal (which published nothing during all these months except the speech of the counsel for the company in full, at advertising rates), joined now in the attack on the commission. So violent were the attacks that it looked for a time as if popular opinion might destroy the commission. Yet the charges were without foundation. The returns made to the commission were not public records: still less was the leaf in question. The essential fact in regard to the Bay State companies (the existence of the obligation for \$4,500,000) had been given to the public by the commission itself; and its own special report of the preceding year was the first document in which dollar gas had been declared to be possible.

Under all the circumstances, it was scarcely to be expected that the committee would reach unanimous conclusions. The report (presented on May 23) was signed by seven members; while one minority report bore six signatures, and another a single name. The facts as found by the committee were substantially those given in this series of articles. In the light of the conditions under which the investigation was carried on, it is remarkable that no attempt was made by the committee to distort,

exaggerate, or conceal any important facts. The conclusions were that there had probably been no violation whatever of law. In the opinion of the committee, while the extra-state capitalization depending on the Massachusetts companies exceeded the value of the property by from \$5,000,000 to \$6,000,000, the dividends of the domestic corporations did not amount to more than 8 per cent, on the value (not the cost) of the property. The report upheld the legality of the obligation for \$4,500,000 on the ground that it was issued with the consent of all the stockholders, with no creditors to be defrauded and without violating any statute.* The committee was expressly ordered to report upon the question whether or not any of the charters ought to be revoked. With the view of the facts and the law set forth above, of course, it reported against the forfeiture of any charter.

The majority of the committee made a few general recommendations as to the power of the Gas Commission, the publicity of its records and computations, the future issue of securities only for full value, and the like. The minority reports made some similar recommendations of a general sort, but urged specifically that the obligation for \$4,500,000 be wiped out. No bills accompanied any of the reports.

By the time the reports of the investigating committee were submitted, the session was drawing to a close. If any bills were to be put through, efforts must be speedily concentrated. One introduced by Mr. Lyford (of the committee) was rushed through both houses, with a narrow majority in the Senate, and became law on June 10. It revoked the charter of the Bay State Company, unless it should cancel the obligation for \$4,500,000 within six

*The committee makes the following comment on this point: "It may, perhaps, truly be said that to give this obligation of \$4,500,000 and \$450,000 in each by the Bay State Company, for its plant costing not less than \$750,000 to \$1,000,000, was a dear bargain, an unconscionable trade, a usurious contract; but who shall say that they had not the legal right to enter into such a bargain, and who can take exception thereto?" Report, p. 5.

months without incurring new obligations, save that additional share capital might be issued to such an amount as would not make the total liabilities of the company exceed the actual value of its property, as judicially determined.* As previously explained, this was found to be \$2,000,000: and the company issued \$1,500,000 of additional shares, and cancelled the obligation November 24, 1893. It was on the basis of this new issue of stock that the last batch of Boston United Gas Bonds was put out. In a previous article I stated that this issue of bonds amounted to \$1,000,000. It is extremely hard to follow the transactions of the extra-Massachusetts Bay State Companies. have reason to believe, however, that, of the last \$2,000,-000 of Boston United Gas Bonds (first series) issued, but \$700,000 (instead of \$1,000,000, as previously stated) were, under the trust deeds, based on improvements; and the remaining \$1,300,000 were turned over to the holders of the obligation for \$4,500,000 in payment for the same.†

Thus ended this remarkable campaign against the companies. The mayor appeared to be successful at every point. Under his leadership the price of gas had been made lower than prevailed in any other large American city; public opinion had been created and directed; the policy of the State in regard to competing gas companies had been reversed; \$3,000,000 of fictitious capitalization had been squeezed out of a great corporation by legislative fiat; and the legislature, for the second time in generations, had resorted to the heroic remedy of undertaking to revoke the charter of an active corporation.

In a future article I shall attempt to give some idea of what these apparent gains cost the public.

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*Chapter 474, Acts of 1893. Forty-four lighting bills had been introduced during the session. In addition to the above act relating to the Bay State Company, but two other acts were passed; namely, an unopposed amendment to the general municipal lighting act and a local electric lighting act.

† Compare this Journal for October, 1898, pp. 18, 27, of the current volume.

CAN WE KEEP A GOLD CURRENCY?

No previous year in our history has seen such an increase of the stock of gold in the United States as that which marks 1898. Our product for the year is believed to have exceeded that of the richest period of the California discoveries, our imports surpassed by 50 per cent. the highest sum ever before reported by our customs records, and these enormous receipts were offset only to an unimportant extent by exports. Looking at the influx from abroad, it is safe to say that no commercial nation has ever before received such a mass of gold in a single twelvementh for the supply of its own requirements. Taking our mining product and imports together, our total receipts in 1898 exceeded even those of England, the great distributing reservoir of gold, which also then reached their highest point.

Although the course of trade which produced this remarkable result is sometimes spoken of as if it betokened some radical change in our commercial relations, careful examination will show it to have been the consequence of precisely the same influences as those previously at work in our foreign dealings. Allowing for changes wrought by eighteen years of rapid national growth, the course of our foreign trade from the fall of 1896 bears a strong resemblance to the wonderful tide ending in 1881, which established the permanence of the specie payments, undertaken with such doubtful prospect of success at the beginning of 1879. In both cases the United States were able to command gold until every reserve and depository was overflowing.

Still, at the bottom of much of the current discussion of financial questions, there is often found a doubt, express or implied, as to the ability of the people of the

United States to maintain a currency on the gold standard. This doubt relates to something more than our present ability to hold gold, with our paper currency in the top-heavy condition to which it has been brought by thirty years of haphazard legislation. It involves the much broader question whether there is not something in the economic characteristics or relations of this country, as compared with the other great commercial nations, which makes it difficult, perhaps impossible, for us to retain permanently what might otherwise be regarded as our natural proportion of the world's stock of money.

It is hardly surprising that this doubt should sometimes spring up. As no part of our financial system now works according to expectation, we have nearly the whole of the export demand for gold concentrated upon the treasury. Any cause which lowers the gold balance in the treasury, whether it be an unusual demand for the redemption of notes or a deficiency of revenue; weakens the sometimes narrow foundation on which our paper currency stands; and, as there is no provision for systematic repair, the possibility of a suspension of gold payments by the government instantly comes to mind. For the greater part of the time, in the last eight or ten years, the attention of the public has been fixed upon the treasury balance. Any movement in the wrong direction has been viewed with alarm, any demand for the redemption of legal tender notes has come to be described as a "raid," the export of gold has become an event of black significance. The line to be drawn between the embarrassments caused by remediable defects of system and those springing from some inherent financial incapacity of the nation, is not always made out with ease; and we can hardly wonder, therefore, that the doubt whether, under any arrangement of the currency, we can expect to hold our own in the competition of international exchanges should sometimes gain ground. It is on the fundamental question thus presented that I now propose to offer a few considerations.

The general advantages with which the United States enter the field of international trade are manifestly such as to raise a strong presumption in favor of our ability to maintain a gold currency, if we will,—a presumption to be controlled, if at all, only by showing the existence of some highly exceptional disqualifying condition. We have a territory of remarkable productive capacity, already developed to such a point as to place us in the first rank as a producing country. Our people have the qualities needed for the most effective use of this source of material wealth, and are practically free from the burdens of debt and armaments which fetter the energies of most of our rivals. Our industries are varied and highly organized; our industrial outfit for the production, transportation, and exchange of goods, is vast in extent, and in many branches of unprecedented excellence; and our accumulation of capital has been extraordinary in rapidity and amount, as is evidenced, significantly for the present purpose, by the supply of gold in our hands, which, by the mode of estimate followed by the treasury, must now largely exceed \$900,000,000. To all this is to be added the fact that the United States have long been the first gold-producing country in the world, and that, if we now take the second place, this is not because our own annual supply has fallen off, but because that of South Africa has come into existence.

If now we seek for a possible disqualifying condition, tending to defeat the presumption created by these solid advantages, original and acquired, we must look for it either in the trade in merchandise carried on by this country with others, or in our strictly financial transactions with the rest of the world. It is only in dealings of these two kinds that we receive gold or part with it, on any great scale, and it is therefore in one or the other set of relations thus created that any such exceptional characteristic as is now sought for must exist.

Taking into consideration, first, the economic character of our exchange of merchandise with other countries, it is clear that, as regards the movement of gold, the position of the United States is one of singular advantage. This fact we recognize in our confident moods, but are inclined to overlook in the presence of any financial difficulty. Summarily stated, the advantage consists in this,—that our demand for the goods of other nations is, on the whole, far less intense than their demand for ours. This is, doubtless, at variance with much that is often said as to our tendency to over-importation; but the truth of the statement is demonstrated by well-recognized facts, of which the history of 1898 offers a convenient illustration.

The crisis of that year came on so late in the spring that the imports for the fiscal year ending with June show little trace of its effects; and their net amount, \$849,800,000, is one of the highest then recorded. Under the pressure of the revulsion our imports for the next fiscal year, 1893-94, fell more than \$211,000,000. A sudden change of that magnitude necessarily implies some extraordinary alteration of economic conditions, and great individual hardship as the result; but it also implies a wide range of adjustable demand, previously satisfied by imported goods. The nature of this demand is disclosed by the classification of imports in the treasury returns. Under Class I., articles of food (of which seven-eighths were made up by sugar, tea, coffee, and fruits), there was an increase of imports in 1893-94, amounting to over \$6,000,000; under Class II., crude materials for domestic industry, there was a drop of 40 per cent., or nearly \$90,000,000; under Class III., partially manufactured material imported for further manufacture, there was a fall of 31 per cent., or a little more than \$30,000,000; under Class IV., manufactured goods for consumption, there was a fall of 35 per cent., or \$51,000,000; and under Class V., luxuries, including silks, laces, tobacco, wines, and liquors, there was a fall of over 86 per cent., or \$46,000,000.

These figures tell a plain story of enforced economy, by which a great people, under the pressure of a revulsion, changed for the time the scale and the distribution of their demands for consumption, slackened the productive machinery which supplied some great classes of demand, and undertook to live within their present available means. So far as our foreign trade was concerned, this economy was practised, not, indeed, with ease, but chiefly by cutting off the superfluities and the dispensable comforts of life and the material for their production, without, however, sacrificing the articles of necessary consumption, or even "the free breakfast table." Under similar pressure in other years the shrinkage of our demand has followed a similar course, marking a high degree of control on our side of the international trade.

If we look at the other side of the trade, and examine the demands made upon the United States, we find that cotton, breadstuffs, cattle, and provisions made up two-thirds of our domestic exports in 1898 and nearly two-thirds in 1894, the total rising from \$831,000,000 in the former year to \$869,000,000 in the latter. In neither year were our exports of these leading articles at their highest. Our cotton crop fell off in 1893 by more than 2,000,000 bales, and our yield of wheat fell in 1894 by more than 100,000,000 bushels. But the foreign demand for these products is plainly not a controllable demand in the same sense in which our demand for manufactures is controllable. The demand for cotton is as continuous as that for any article of consumption can be. Although our exports vary with the abundance of our crop, the purchases of Great Britain in a long series of years show great steadiness; and the United States still send to that chief customer as large a proportion of her annual supply as they did before the Civil War. Our cotton, in short. finds its market in bad years as well as in good. It supplies the indispensable material for a vast industry, which may indeed flag in bad times, but cannot stop.

Our exports of food, which are now seldom below \$300,000,000, swell, of course, with any deficiency of crops in Europe. The demand for them is imperative within the limits set by other sources of supply, and, when strengthened by the deficiency of those sources, is neither to be satisfied by a substitute nor to be reduced by economy of consumption. It may be said, therefore, of our great exports, that the demand made upon us for cotton is constant and imperative, and that the demand for breadstuffs and provisions, though irregular, is always large and often of remarkable intensity.

The extraordinary movement of gold to this country beginning in 1896 is the latest proof of the importance of this characteristic of the relative demands of the United States and of the other leading commercial na-Illustrations to the same effect, however, can easily be found in the statistics of our foreign trade, all going to show that, while, like any rapidly developing nation, we often by large imports strain our ability to pay, any severe pinch finds us able to forego a large amount of purchases, - which, after all, are not for the supply of imperative wants, - and thus to check the outflow of gold; and that, on the other hand, the urgent demands made upon us frequently turn the current of gold in our direction with amazing force. That these urgent demands are irregular is an undeniable drawback to the advantage which we enjoy. Our command of the situation, which is now intermittent, might no doubt be constant, and the change in the volume of our trade less serious, if the need for our products were always felt at its maximum by our chief customers. This irregularity, however, is the condition annexed to the enjoyment of a resource which has no parallel in the commerce of the world.* How far it can be thought to place us at a disad-

^{*} The extent of the irregularity may be seen by the following statement of the percentage ratio of the annual export of breadstuffs, provisions, and food animals compared with the mean for the last ten years:—

^{1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 .69 ,91 .84 1.84 1.63 .96 .76 .83 1.05 1.62}

vantage compared with other countries as regards ability to retain a gold currency will be seen more plainly when we come to consider the actual movements of gold to and from the leading nations respectively. For the present it is enough to point out the strong probability that a trade in which we buy for the satisfaction of our own secondary wants and sell chiefly to supply the primary needs of others, whether the course of this trade be uniform or not, gives us a position of exceptional advantage. It is at any rate certain that it presents no reason for concluding that the United States have any peculiar incapacity for retaining gold.

Turning now to the other quarter in which any disqualifying condition for maintaining a gold currency must be sought,—the strictly financial relations of this country with others,—we have to deal with a state of things far more complex than that already considered, in which misconception is far easier. Extraordinary rapidity of der lopment and the possession of resources which offer a vast field for investment have made the United States the greatest borrower in the modern world. In saying this of our people as a community, the word "borrow" is used in a wide sense, to include all the forms in which foreign capital is employed within our limits in uses to which domestic capital must otherwise have been applied. Whatever form the evidence of the transaction may assume, whether it be found in national, State, corporation, or individual indebtedness, in the bonds or in the stocks of railways or industrial enterprises, or in the private ownership of manufacturing establishments,—in all these cases and under many other disguises, the people of the United States as a whole are employing foreign capital in the support of their general system of industry. The interest, the dividends, or the current profits, if any, are the reward of the lender: the general gain, convenience, and stimulus coming from the development of a particular resource or industry, or from the more rapid and symmetrical development of our system as a whole, inures to the advantage of our own community. Borrowing in this sense we have carried on for a century upon an ever-increasing scale, and shall doubtless long continue to carry on, unless we wantonly sacrifice our unexhausted ability for vigorous advance.

As great debtors, in this large sense, the United States have necessarily great payments to be made to their creditors,—to be made according to the standard of the commercial world, and therefore called, conveniently enough, gold payments. This consequence of our position as a debtor nation is habitually spoken of as a perpetual drain upon our stock of gold and as a necessary hindrance to the maintenance of a gold currency. And yet nothing is more certain than the fact that the interest, dividends, and profits upon foreign capital employed in our industries are no more a drain upon our gold than any other debts to be paid in the markets of the orld. They no more require the export of gold than a payment for goods or securities; and even if by their terms the payment is to be made, not, we will say, in pounds sterling, but specifically in gold coin, neither the obligation nor the mode of its execution differs from that of the payments habitually made in foreign trade. It is not, even in this case, the actual transportation of metal across the Atlantic that is called for, but the payment of metal in London, Paris, or Frankfort, the debtor providing the means of payment at that place as he finds easiest,—by selling American wheat or cattle, or perhaps by a fresh loan.* In fact, in the actual process of settlement, one international

^{*}Thus the Geneva award of 1872 required the payment of \$15,500,000 by Regland to the United States "in gold." The gold was paid to the treasury, but the transfer across the Atlantic was made by a shipment of United States bonds which had been called for payment. F. W. Hackett, The Geneva Award Acts, p. 176,

liability is like another. They all take their place among the conditions which regulate the barter of commodities between nations, stimulating sales here and discouraging them there, and thus by their action on the relative level of prices requiring habitually only the clearing of comparatively moderate balances. "Gold interest" and the like, in the settled course of trade, simply call for the regular export of a larger amount of salable commodities, the proceeds of which are finally converted, in the foreign market, into that medium which secures the execution of the contract for foreign interest payments.

Without further exposition of these familiar facts, it is enough for the present purpose to point out that, although a systematic course of foreign payments on a large scale may have much to do with the habitual level of prices in the country making the payments, it has no tendency to strip the country of the gold necessary to carry on its home transactions upon what has become, for it, the normal level. It is only when we come to the return of borrowed capital, or to the transfer in either direction of securities which represent debts, that we find in the relations of the borrower anything that can be treated as a permanent disturbing element. Indeed, the return of borrowed capital, or, in other words, the payment of debt, can also be set aside as little likely in practice to be the cause of serious disturbance, so steadily is cancelled debt replaced by fresh borrowing. It is the transfer of securities as investments or for speculative purposes, sometimes in large masses, acting as an unseen import or export, and therefore calling for settlement in precisely the same way as a movement of merchandise, that is most important from the present point of view. It is this which, at all events, appears to be the cause of most frequent anxiety as to the drain of specie. The possibility that, at some moment of stress on one side of the water or the other, stocks and bonds to an unknown amount may be

launched by London upon the New York market, creates a vague apprehension, all the more disturbing because the facts involved can never be measured with precision.

No doubt the great class of "international securities," which have so important a place in the operations of modern finance, while they facilitate settlements and make transactions easy which would otherwise be impossible, at the same time often make the movements of commerce unsteady, and increase the swiftness and intensity of their changes. This, again, is a drawback suffered for the sake of great benefits enjoyed, the world being, on the whole, immeasurably the gainer. In the use of these securities the United States have a leading share, not only because of the extent of their general dealings, but because so large an amount of the securities are issued and domiciled in this country, and so find a natural market here. It is not probable, however, that, either in the general trade of the world or in our particular trade, the movements of gold have been increased by the dealings in this kind of property. On the contrary, it is more probable that, like any other improvement which introduces new varieties of desirable exports, the increased movement of securities has, on the whole, tended to diminish the transfers of gold relatively to the value of goods exchanged, and that this relative diminution has been felt in the trade of the United States,* although with our growth the absolute amount both of goods and of gold has vastly increased.

*In the last five decades the aggregate imports and exports of merchandise by the United States, compared with their aggregate import and export of gold, have been as follows:—

				Mercha	ndise.	G	old.	Percentage of Geld to Merchandise.		
1849-58				\$4,621 I	nillions	\$389 n	aillions	.0842		
1859-68				5,641	**	704	66	.1248		
1869-78				10,118	66	580	66	.0524		
18 79-88				14,098	"	571	44	.0405		
1 889 -98				16,848	"	1,094	44	.0649+		

The exceptional conditions of the second and fifth decades require no comment.

But our present inquiry is whether the dealings in international securities make the hold of the United States upon a specie currency weaker than that of other countries which successfully maintain such a currency. It would be strange if this were the case; for, as they sell what we buy and buy what we sell, any disturbing tendency felt by us must also be felt by them at some stage in the series of operations. London, for example, is a buyer when New York sells and a seller when New York buys, having the same sensitiveness to an outflow of gold and even greater anxiety as to the sufficiency of the export trade to counteract any serious drain. If, on the whole, New York is weakened by this class of operations, often no doubt highly speculative, is not London also weakened by a similar process? Do we, in fact, lose anything in the comparison of our position and its advantages with those of the country which for nearly eighty years has maintained a sound specie currency without interruption? The truth is that on each side of the water international securities, when imported, are an import of the class not necessary for the satisfaction of any imperative want, and are bought therefore because the purchase is likely to be profitable, and, when exported, are sold, if at all, for such price as the purchaser judges to be for his advantage. The disadvantage of having them crowded for sale upon the home market, so often dwelt upon in discussion in this country, is, at all events, slight in comparison with the disadvantage suffered by the country which finds itself compelled to make unusual purchases of food or of any great staple for manufacture.

It is convenient, at this point in our discussion, to consider briefly the special advantage, as compared with the United States, which England is often said to derive from her peculiar position as a commercial nation. "England," it is said, "being the great creditor country of the world,

can draw gold as she pleases from any quarter, whereas this is a debtor country, never secure against demands from abroad." This idea of the practical command of the gold of the world lying in the hands of the great creditor, perhaps owes its origin partly to the fact that the commercial relations of England make her the agency through which a large part of the gold produced by the United States, Australasia, and South Africa, finds its way into the currency of the world at large, and partly to the visible movements of that great financial barometer, the Bank of England rate. It is true that her function as the distributor of gold does not enable England to retain more than a rather small proportion of what comes into her hands. It is also true that the sliding scale of discount, by which the Bank of England protects its own reserve and is apt to give the signal for the London market generally, is a means of defence in no way peculiar to that institution. It is used systematically and quite as effectively by the German Reichsbank. The apparent neglect of it by the Bank of France is due, partly to the fact that the enormous stock of metal in the bank enables it to yield up gold, if need be, to a great amount with no sensible inconvenience, and partly to the fact that, by charging a premium upon gold, the bank is able to mask its defensive policy, and to preserve a generally uniform rate of discount with little regard to an outflow of money. The English method may in fact be seen at work in our own country, in a less definite form, but with similar effect, in the changing rates of interest prevailing in the great money centres.* Nevertheless, the facts that the great streams of gold converge in England and diverge from her, and that the Bank of England conspicuously acts with reference to them, are enough to account for the general impression that the controlling power is to be found there.

The following extract is from the hearing before the House Committee on Banking and Currency, 1897-98, Hon. C. S. Fairchild being under examination:

But, besides these crude conceptions of the practical working of English commerce, there is something more implied in the common idea of England as "a creditor country." A creditor can call for the payment of debts due to him, and can require payment in money. Cannot England, then, call in her dues in gold, the world's money? Of the fallacies involved in this argumentative question, let us consider the fallacy of personifying England,—of saying "England" when we really mean "some Englishmen." By a figure of speech the country is presented to the mind as a community having a single directing will, a single interest and determining purpose, extending credit or collecting debts from definitely formed policy, and capable of saying to itself upon occasion that gold, and not commodities, must now be secured in payment. This might be true, in a degree, if the English polity were communistic, and if a committee directed the operations of the banks, the commerce, and the manufactures of England, and made provision for her daily consump-But the real case to be kept in mind is that in which, instead of a single conscious will governing her action, there are some millions of individual wills, each determining within its own sphere; and, instead of a single clear line of chosen policy, there is only the confused outcome of the varying interests and needs of vast numbers of men.

In this, the actual state of things, the demand of one

"Secretary GAGE.—I agree with what Mr. Fairchild has said." Report, p. 135.

[&]quot;Mr. FAIRCHILD [referring to the raising of its rate by the Bank of England].—Now in this country the same thing takes place when a man borrows a million dollars to pay a debt abroad. It makes a diminution of the loanable funds, and that of itself works an increase in the rate of interest; and, when that rate of interest becomes large enough, the seller of exchange, instead of meeting his remittances by the actual shipment of gold, finds a cheaper way to meet his bill of exchange. We do not have to have any specific measures to clothe banks with specific power to do that. It does itself. It is one of the natural laws which works itself out; and, if we do not put any impediment in the way, it will take care of itself. That is my judgment about it.

class of the population for cotton to spin, and the demand of others for wheat or for beef, are not and cannot be subordinated to the desire which any set of men or of institutions may feel to see gold flow in. On the contrary, the requirements for consumption, determined by the occupations and relations of a great people, are fundamental conditions, to which financial interests and policies, under whatever name, must of necessity conform their action. For illustration we need not go farther back than the great export movement of 1896, which between August 1 and December 1 brought into the United States \$74,000,000 of gold, \$40,000,000 of it coming from Although the Bank of England in seven weeks raised its rate from 2 per cent. to 4, it could not stop the outflow which in four months drained one fourth of its specie from its vaults, so uncontrollable are the currents which take their rise in the needs and habits of a whole people. The great trade movements of a country like England can never be concerted or calculated movements, as the language used about them often seems to imply. They are the result of forces quite independent of each other in origin and often in strong conflict, which the small fraction of men known as the financial world cannot withstand or govern, but which they can often turn to account.*

These considerations—no doubt sufficiently obvious, but often neglected—apply to the action of England as a purchaser of merchandise from other countries. They also have a close application to her action as a holder of the securities of other countries. The class of Englishmen who hold foreign bonds or stocks as an investment will, no doubt, act at times under a common impulse of con-

⁶ How impossible it is even for a syndicate comprising "every banking house and every bank in New York City, with important European connections," to control, beyond certain limits of time and favoring circumstances, the course of foreign exchange, is well shown by Mr. Noyes in his account of the gold movement in 1895. Thirty Years of American Finance, chap. x.

fidence or distrust, as investors do in our own country. This action may seriously disturb the financial relations of their own country with others and affect the movement of gold for a time, between England and this country, for example, as it has been seen to do. This is, of course, to be noted as an element of instability in our international finance, which must be recognized, although there may be a question whether a set of trade relations, which already include many unstable elements, is, in fact, made any more unstable by the introduction of another class of variables, with its chances of compensatory action. But it concerns us to notice that this action of English investors, although the result of a common impulse, is no more a concerted action than the movement in which English mill-owners buy cotton, eagerly or sparingly, as the case may be. It is the action of a great body of individuals. seeking advantageous employment each for his own capital, encouraged or disheartened by current opinion as to American securities, and neither bidding against each other nor selling at a loss in order to affect the general money market or turn the stream of gold. Even the class of bankers and other temporary holders of securities for speculative profit --- a class of men as little disposed as any to sell their property at a sacrifice - act in the same manner, according to the dictate of individual interest, and under no leadership or control which could justify the conception of concert and dangerous singleness of aim, which we have been considering.

It is perhaps hardly necessary to point out that, when we thus take into account the complex influences which must at any given time determine the course of dealing between England and other countries, gold loses a part of the quality as a quasi-legal tender for international trade, sometimes ascribed to it in current discussion. As a commodity, in universal demand at some rate or other, it can always be used in payment by the debtor nation, if

offered on terms satisfactory to the creditor nation. But payment in gold cannot be required by the latter so long as there is, among the millions of its population, any sufficiently large class of wants demanding for their satisfaction the merchandise exports or the securities of the debtor in preference to money. The legal tender law of the place necessarily regulates the mode of payment in London, to be observed by each individual debtor; but, as has already been pointed out, it is no part of that law, nor is it a necessity of the case, that the debtor should have transported his means of payment across the Atlantic.

The conclusions reached by these general considerations are greatly strengthened, when we apply to them the test of observed facts. England, France, and Germany are the countries upon which the United States chiefly draw for gold, and by which the United States are most heavily drawn upon, all three successfully maintaining their currencies upon the gold standard. How, then, do the actual movements of gold into and out of the United States. for a series of years together, compare with similar movements as reported by the three countries named? For the purpose of this inquiry the nine calendar years from 1882 to 1890 are first taken, as making up what can be called a fairly normal period. They begin after the close of the great influx of gold which insured the success of specie resumption by the United States, and they end before the subsequent saturation of our currency with paper and silver had caused serious disturbance. They include years of great prosperity, and they cover the period of depression following the financial crisis of 1884. Both the products and the imports of gold by the United States are given, to show our total receipts from year to year; and against them are set our annual gold exports. Annual imports and exports of gold are also given for each of the other countries, all being stated in dollars for convenient comparison.

[IN DOLLARS,-- 00,000 OMITTED.]

	Uz	ited St	ates.	England.		France.		Germany.	
	Prod's	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.
1882	32,5	13,4	38,7	70,	58,5	54,7	39,1	6,8	9,3*
1883	30,	22,1	6,	37,7	34,5	12,5	26, *	4,9	10,
1884	30,8	28,	40,9	52,3	58,5	24,6	15,8	4,4	7,94
1885	31,8	23,6	11,4	61,3	58,1	47,	38,8	10,1	6,4
1886	35,	41,3	41,3	63,	67,1	50,4	38,2	11,2	5,5
1887	33.	44,9	9,1	48,5	45,4	18,	49,8	13,2	4,
1888	33,2	11,	34,5	76,9	72,8	19,5	37,1*	39,9	23,9
1889	32,8	12,	50,9*	87,2	70,4	65,2	25,	15,7	12,5
1890	32,8	20,2	24,1	114,8	69,6	22,6	48,3	24,2	9,9
Totals	291,9	216,5	256,9	611,7	584,9	314,5	318,1	130,4	89,4
Average	32,4	24,	28,5	68,	59,4	34,9	35,4*	14,5	9,9

It appears that during these nine years the United States parted, on the average, with about one-half of the gold received by them from the mines or from abroad, and that England parted with seven-eighths of the gold received by her. These two countries, the United States as a mining country and England as the great commercial centre, acted as the distributors of an immense addition annually made to the world's stock of money, each retaining its own proportionate share. In this operation, each country was, to a great extent, a natural exporter of gold. Neither, in fact, could avoid exporting heavily, so long as its trade or its mines brought in a supply obviously so far beyond its power of healthy absorption. Of the two, it is important to observe, the United States had the firmer hold upon gold, so that this country was able to carry on the accumulation which it had begun to make in the later years of the long suspension, and thus to strengthen steadily the specie basis of its paper currency. The annual supply of the United States was also the more constant, its minimum being .78 of its average and its maximum

^{*}Export exceeds receipt.

1.38, whereas the annual supply of England ranged more widely, from .55 to 1.69 of its average. In the year of strongest export by the United States, their ratio of export to supply was scarcely higher than that of England in her strongest exporting year; and there were two years of the nine in which the United States exported less than .12 of their supply, whereas in no year did England export less than .60 of hers. Finally, England shows two years with an excess of exports over receipts of gold, and only one is shown by the United States.

As for France, her imports and exports of gold during these nine years are remarkable for their great amount, for their extreme irregularity from year to year, and for their close approach to equality, taking the whole period together. Germany also exhibits great irregularity of movement, with a constant accumulation in progress for all but the earlier years, the amounts actually moved being, for the most part, of but moderate importance.

Without pursuing further the comparisons suggested by this table, it is clear that during this period the United States were not only relatively, but absolutely, strong in gold, and gave full proof of ability to maintain their currency upon this standard, and this notwithstanding an infusion of nearly \$300,000,000 of legal tender silver. But the turning-point was reached by 1890. The accumulated mass of silver coin, the issue of more legal tender paper for the purchase of a vast weight of silver bullion,*

*The Secretary of the Treasury said to a committee of the House of Representatives, December 16, 1897: "I have asked a gentleman in New York, . . . who has been Treasurer of the United States, and who has been Assistant Treasurer in New York for many years, Mr. Conrad N. Jordan, about this. He is in a position where he watches pretty closely the movements of foreign exchange. . . . He says it is the last \$200,000,000, which has put us to the blush all the time, that has been our trouble. If we get rid of \$200,000,000, and get a sufficient gold reserve, we will not be troubled; and the country will not fear that we are going to break." Hearings and Aryuments before the House Committee on Banking and Currency, 1897-98, p. 23.

Mr. Jordan's \$200,000,000 apparently represented the treasury notes of 1890, \$114,000,000, and an increase of silver certificates from July, 1890, amounting to about \$86,000,000 more.

the gradual conversion of that bullion into standard dollars, contemplated by the law and set in operation, the loss of confidence in the stability of gold payments by our government, and our increasing discredit abroad,—all combined thenceforward for several years to loosen the hold of the United States upon gold. Violent financial revulsion was the inevitable result; and, in the eight calendar years from 1891 to 1898 inclusive, gold moved between this country and Europe in heavy surges, as shown in the following table, compiled on the same plan as that already given for the years 1882-90:—

United States. England. Ger many. France. Exp. Prod't Imp. Exp. Exp. Exp. Imp. Imp. Imp. 1891 . . 79,1 45,4 33,2 45, 147,4 117,7 69,9 52,6 28,9 **3**3, 17,5 76,5* 42,5 35,6 1892 21,5 105,1 72,2 74,8 1893 36, 72,8 79,8 120,9 94,9 58,9 22,6 33,3 24,2 20,6 134,3 89,1 1894 39,5 101,8* 76,2 20.8 72.5 12,7 104,6***** 58,3 49, 58,1 1895 32,5 23,2 175,4 46,6 104,1 47,2 19,6 1896 52,4 58,1 104,7 119,2 146,7* 60, * 47, 1897 150, * 28,2 57,4 34, 34,8 146,7 56,6 25,4 36,8 1898 158,2 178.1 60,4* [67,5] 16.2 212.8 38,4 Totals . 366,3 485,3 550,6 939,9 494,8 1,161,8 303,3 Average 45.8 60,7 68,8 145,2 117,5 61,8 37,9

[IN DOLLARS, 00,000 OMITTED.]

In this table the change wrought in every column by the exceptional year 1898 is so marked that it is worth while to consider the facts as they stood at the close of 1897, when the footings were as follows:—

		nited !	States.	Eng	jland.	Fr	ance.	Germany.	
	Prod'	t Imp.	Exp.	Ĭтр.	Exp.	lтp.	Emp.	Íтр.	Exp.
7 years .	298.8	327.1	584.4	949	761.8	456.4	242.9	313.3	196.2
Average	42.7	46.7	76.3	135.6	108.8	65.2	34.7	44.8	28

The relation of the United States to the three other commercial countries then showed a remarkable change

^{*}Export exceeds receipt.

since the period closing with 1890. Instead of being the greatest accumulator of gold, this country had become the least, and France held the first place. Instead of our supply from all sources being the most constant of all, the range between its minimum and maximum was the greatest; and, in years of greatest export, our ratio of export to supply was the highest. And yet, taken by itself, the exhibit for the United States indicated a far greater power of resistance to a continued drain than might be inferred from this comparison with other countries. Omitting 1896 and 1897, when the tide had turned again in our favor, the five years, 1891-95, showed a total net loss by the United States of scarcely more than \$65,000,000; and, even if we add to this the estimated amount of gold used in the industrial arts, we have an aggregate loss from our stock not exceeding \$142,000,000 in five years of unexampled disturbance,— a loss more than made up by the returning current of the next two years.* After all, in the series of seven years in which our legislation might almost be thought to be expressly designed to expel gold from the United States, our exports were not quite seveneighths of our receipts from imports and mines. In the same years taken together, England also exported nearly in the same proportion, parting with four-fifths of all her receipts.

Violent as the changes were in these years, the years of recovery came with singular promptness. In 1891 and 1892 our exports of gold were greater than our receipts; and yet in 1898 the returning current gave us a favorable balance for the three years. Both 1894 and 1895 carried out a balance of gold, but 1896 turned the scale in our

 $^{\bullet}$ The treasury estimate of the stock of gold coin and bullion in the United States gives the following sums: —

Report of the Treasurer for 1898, p. 110.

favor for another three-year period. 1897 practically left us in possession of our own product, and then came 1898, with such a tide in our favor as to completely distort the comparative results of the first seven years of the period. Taking the average for the eight years, 1891 to 1898, the United States again appear as the greatest accumulator of gold, parting with less than two-thirds of their gold receipts, whereas England in the same years parted with more than four-fifths of hers.

How large the accumulated stock of gold in the treasury, in the banks, and in the hands of the public, has become in the twenty years since specie payment was resumed, is a question as to which the treasury estimates may at least give us an approximation. Starting with an estimate of about \$213,000,000 in June, 1878, and following month by month, with great minuteness, the coinage and the movements of American coin in and out, the statisticians of the treasury gave us in the latter part of 1881 a stock of over \$500,000,000, and, with occasional relapses, brought the estimates to \$700,000,000 by 1888, and to \$900,000,000 by October, 1898. The sums are vast, and it has never been easy to account for the great amounts which must be supposed to exist outside of the visible depositories. Still, the figures, when checked by the operations of the mint and by the annual product and movement in foreign trade, conform sufficiently well to the rough probabilities of the case. They give a solid assurance that, as a support for our monetary system, we have a stock of gold sufficient, and sufficiently nourished by the resources of mining and commerce, to meet the needs of a great and growing nation. Actual or probable inadequacy of supply cannot be alleged as a condition operating to our injury.

This, then, is the state of the facts. Our gold is at times drawn from us in considerable amounts, which, however, bear but a low ratio to our total stock, and are drawn away in no small measure by the aid of our own improvident legislation. The recovery comes with no great delay, and with extraordinary completeness, as the result of economic advantages of which imprudent policy may impair, but cannot destroy, the value. No reverse is strong enough to wrest our gold currency from us. And yet, judging from the past, two or three years may be enough to carry us from our present extreme of confidence to the same dread that the foundation is slipping from under us, that mastered the public mind in 1893 and 1896. We have the material to build a system as solid and as calmly enduring as that of England, but our failure for twenty years to bring into order our piecemeal legislation on this subject, has cost hundreds of millions in shattered enterprises and stagnant industry. The foolish boast which some of our public men were fond of making a few years ago, that our currency system is the best ever known, and indeed perhaps perfect, is not current at pres-In fact, there are not many who do not condemn the system for one reason or another. Still there is a perilous delay in the work of reform.

CHARLES F. DUNBAR.

NOTES AND MEMORANDA.

RECENT RAILWAY LEGISLATION IN KANSAS.

Railway legislation of an unusual character has recently been enacted in Kansas. The Populists, who secured control of the State government in January, 1897, were pledged to the passage of a maximum freight rate bill. A measure of a sufficiently radical character to secure the approval of Governor Leedy could not, however, be passed; and the regular session of the legislature closed without results. The elections of last November served notice on the governor and his party that Populist rule would end on January 1, 1899. Accordingly, he called the expiring legislature together in special session on December 21, and compelled the enactment of a measure that overturns the system of control which has been in operation for the past sixteen years. Under the provisions of the new law the present Board of Railroad Commissioners is abolished, and a Court of Visitation substituted, consisting of three judges elected for terms of four years each. A State Solicitor is provided to represent the State in all actions before the court. This court is given power to determine all questions as to reasonable freight charges and classification of freight, to secure adequate transportation facilities and proper safeguards against accident, and to compel the performance of all duties required by law. For the furtherance of these ends, it is equipped with full common-law and equity powers. It may issue appropriate writs and processes, including injunction and mandamus, compel the attendance of witnesses and the production of books and papers, summon juries, punish for contempt, appoint masters, referees, and receivers, and prescribe its methods of procedure. Complaints against railways are to be made on oath to the State Solicitor. A citation is issued to the defendant and served by the sheriff, to which the railway must make reply within twenty-five days, when the case is put upon the docket. Any person or corpo-

ration interested in the result may become a party on application. Complaints are encouraged by a clause which levies the costs against the railway if it loses the case, but against the State if the complainant loses. If the court deems it unjust to act upon the rate in question without a revision of the entire schedule, it may bring the larger question before it for consideration. No schedule promulgated by any railway company is receivable as evidence of the reasonableness of a rate. The court must determine the question after an examination of the value of the road, its cost, indebtedness, and revenues. "The court shall thereupon enter a decree in accordance with its findings...perpetually enjoining the defendant from demanding, charging, or receiving any other or different rates or charges than such as are by the decree determined to be reasonable." Within ten days the defendant must print and publish the revised schedule. Upon refusal to obey the court may after thirty days sequestrate the property, and place it in the hands of a receiver, where it shall remain until the railway complies. Fines and imprisonment are provided as additional penalties for disobedience of law by railway officials. Power to investigate strikes of railway employees and te compel adjustment of difficulties is likewise intrusted to this body. Appeals from its decisions may be taken to the Supreme Court. The act goes into effect on March 15; and a court is to be appointed by the governor on the first Monday in April to act until the next general election.

A few criticisms of this legislative experiment suggest themselves. In the first place, it was unnecessary. It must of course be admitted that the Kansas Board of Railroad Commissioners is not clothed with the power which many commissions enjoy. It can determine reasonable rates only upon complaint, and then alone for the shipment in controversy. But this state of things might have been relieved by the delegation to the commission of the power to prescribe a complete schedule of maximum freight rates,—a privilege for which the board has asked in vain. Notwithstanding, however, its limited authority over questions of rates, the commission has proved its right to a further lease of life. Its conservative

and careful policy since its inception in 1888 has gained for itself the confidence of the carriers, and has resulted in gratifying compliance with its findings. It is worth noting that the Populists are represented upon this board in the person of ex-Governor Lewelling, who used his influence to prevent the passage of the statute.

Again, the undoubted effect of the measure will be a loss in efficiency. It defeats the main purpose for which boards of railway commissioners are created,—that of furnishing a convenient intermediary between shipper and carrier, by means of which misunderstandings may be removed and evils speedily and satisfactorily remedied. This act creates a court with all the dilatory methods of procedure usual to such bodies.

Finally, its faulty construction presages failure even before the act has been put upon trial. Many of its provisions have been deemed unconstitutional by those who have given the subject close study, and it promises to leave the shippers with less protection than the present law provides. This was recognized by its advocates as soon as the bill was passed, and a vain attempt was made to strengthen it by the enactment of supplementary legislation. The constitutionality of the session itself was for several weeks in doubt, but has recently been sustained by the State Supreme Court. It would indeed be a sad commentary on Populist rule in Kansas if the party were forced to admit that, in the closing weeks of its two years' control of all three branches of the government, it had overreached itself in the matter nearest to its heart, and had left Kansas with less railway legislation than the State has had for nearly twenty years.

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THE TWELFTH CENSUS.

The act of Congress for the taking of the twelfth and subsequent censuses, approved March 3, 1899, really marks what may be called the fourth epoch in the federal census work of the United States. It preserves, to be sure, the machinery adopted for the tenth and eleventh censuses. Prior to the tenth census the enumeration was conducted by United States marshals and their assistants; while in 1880 and 1890 the enumerations were by especially appointed enumerators, under the direction of district supervisors, the work of the enumerators being supplemented for manufactures and in some other cases by experts and special agents. The new act makes no change in this direction; but it provides for a better organization of the Census Office itself. Under the law there is to be an efficient statistical staff as such, besides an assistant director to aid the director in his onerous duties.

But, so far as the subjects of inquiry are concerned, the law makes a new division. It restricts the twelfth census proper to inquiries relative to population, mortality, and the products of agriculture and of manufacturing and mechanical establishments,—practically, four great subjects; and it provides that the only volumes that shall be prepared and published in connection with the twelfth census (except special reports, to be published later) shall relate to these four subjects, and they are to constitute what are designated in the law as "census reports." The requirement that these reports shall be published not later than the first day of July, 1902, may be carried out; but it is hardly possible.

After the completion of the enumeration and of the work relating to the four subjects just specified, the director of the census is authorized to collect statistics relating to special classes, including the insane, feeble-minded, deaf, dumb, and blind; crime, pauperism, and benevolence, including prisoners, paupers, juvenile delinquents, and inmates of benevolent and

reformatory institutions; deaths and births in registration areas (that is, in States and cities which have a registration system); social statistics of cities; public indebtedness; valuation, taxation, and expenditures; religious bodies; electric light and power, telephone and telegraph business; transportation by water; express business; street railways; mines, mining, and minerals, and the production and value thereof. (including gold) and the number of men employed, the average daily wages paid, average working time, and aggregate earnings in the various branches and divisions of the mining industry. The reports relating to all these inquiries, which are supplemental to the four great divisions already enumerated (except those for mines, mining, and minerals, which must be published on or before July 1, 1903), are to be made at such time or times as will not interfere with nor delay the rapid completion of the census reports proper; and all these supplemental reports are to be designated as "Special Reports of the Census Office."

On the whole, the new act is a very great improvement on past laws. It follows very closely the recommendations of the joint committee of the American Statistical Association and the American Economic Association appointed a few years ago to consider the subject of census legislation. particular improvement over the acts providing for the tenth and eleventh consuses lies in the fact that it specifies the topics of inquiry, but leaves to the discretion of the director the form and arrangement of schedules and the specific questions necessary to secure the information required. To have done otherwise would have resulted in a very extended law, stating in detail each form of inquiry under each topic. would have been an impossibility for any committee. matters must be left to the patient work of the statisticians of the Census Office. But the necessity of specifying distinctly the topics of inquiry becomes necessary when it is known that without such designation the penalties for non-compliance with the law cannot be enforced in the courts, for Congress itself must define the misdemeanor in order to have the prosecution receive any standing. If the law left the topics of

inquiry to an official, that would be delegating the power of Congress to define criminal action. It is believed, therefore, that the new act can be more effectively enforced than any previous one.

In comparing the work laid out for the twelfth census with that of the past, a reference to subjects of inquiry and to detailed questions thereunder will show the changes or inherent distinctions of the various censuses. At the censuses of 1790 and 1800 there was but one subject of inquiry, population. In 1810 and 1820 there were two, population and manufactures. In 1830 manufactures disappeared; and there was but one subject of inquiry, population. In 1840 a general subject - including mining, commerce, agriculture, manufactures, and fisheries - was added; so that in that year there were, with population, but two general subjects of inquiry. The census of 1850 marked the first departure from previous experience; and under the expanded legislation providing for the seventh census (1850) there were six subjects of inquiry,population (including a separate inquiry relating to slaves), agriculture, industry (including manufactures, mining, and fisheries), mortality, and social statistics (including crime, pauperism, valuation, taxation, indebtedness, schools, libraries, newspapers, periodicals, religion, and wages). same subjects were taken up in 1860 and 1870, the censuses of these years being taken under the act providing for the seventh census (1850).

The next departure from the earlier provisions took place in 1880, when there was a very great expansion, not only of the number of subjects of inquiry, but of the specific details or forms of questions thereunder. Instead of six subjects of inquiry, as in the three previous censuses, there were 216. The census of 1890 provided for a still larger number, 284 subjects being involved. This statement alone shows the marvellous growth or expansion of census-taking in the United States; but reference to the number of specific inquiries under the general subjects brings this expansion into more striking light. In 1790 there were 4 specific inquiries under the one subject of inquiry; in 1800, 4; in 1810, 9; in

1820, 20; in 1830, 7; in 1840, 81; in 1850, 136; in 1860, 140; in 1870, 154; in 1880, in round numbers, 12,700; and, in 1890, 13,200. The increase in specific inquiries comes very largely under agriculture, manufactures, mining, and insurance, and especially by reason of the extension of the investigation relating to insurance over a period of years instead of for one year; but, even without such practical duplication to swell the number, there would have been in 1880 about 7,000 inquiries, and in 1890 over 9,000. The general subjects for the twelfth census have been stated. How many specific or detailed inquiries there will be under them cannot be stated, of course, until all the plans for the twelfth census are perfected.

These statements as to the increased number of subjects and of special questions under them account for the voluminous publications of the last two censuses and for the time taken to bring them out; although, as a matter of fact, the publications of the Census Office have been issued rapidly in comparison with like publications for foreign countries. The reports of the last census of some European states, that for 1891, have just been received, and some are still due; while all the general facts relative to the eleventh census were before the public in May, 1895, and the detailed volumes were completed and published at least a year earlier, relatively, than those for the tenth census.

With the enormous expansion of the number of subjects and the inquiries thereunder there has, of course, been a like expansion in cost. The first census, with its one subject and four inquiries, cost \$44,377; the second, \$66,109; the third, \$178,444; the fourth, \$208,525; the fifth, \$378,545; the sixth, \$833,870; the seventh, \$1,423,350; the eighth, \$1,969,376; the ninth, \$3,421,198; the tenth, \$5,904,606; the eleventh, \$11,579,165.

With the excellent statistical staff already selected for the twelfth census, and the restrictions contained in the law as to subjects of inquiry, there ought to be secured three great points of improvement over any census of the past; first, increased accuracy; second, more prompt publication; and, third, a vastly decreased cost.

CARROLL D. WRIGHT.

Washington, March 81, 1899.

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COMPARATIVE MUNICIPAL STATISTICS.

The second session of the Fifty-fifth Congress authorized the Department of Labor to prepare annually a compilation of the official statistics of all cities in the United States with over thirty thousand population. Provision is thus made for a comprehensive presentation of comparative municipal statistics, the value and importance of which need not be emphasized to those interested in the problems of municipal government. The only previous attempts at any comparative statement of municipal statistics in the United States have been in the decennial censuses in the volumes on Wealth. Debt, and Taxation, and on Social Statistics of Cities. these, apart from their inadequacy in appearing only after ten-year intervals, have been so defective - especially in their methods of classification and arrangement - as to have little real value. A well-weighed criticism of these census statistics has been recently made by Professor H. B. Gardner in his paper on "Municipal Statistics in the Twelfth Census," read at the New Haven meeting of the American Economic Association, and to be published in vol. xii. of the monographs of the association.

In other countries the importance of municipal government and the value of comparative statistics of their operations have been more fully recognized, and in several countries special publications on municipal statistics are regularly prepared. It may be of interest at this time to call attention to some of the most important of these compilations, and to note how far they are successful in presenting the information most wanted.

The question of comparative finance statistics of municipalities formed a subject of discussion at several sessions of the International Congress of Statistics, as a result of which it was determined in 1878 to establish an annual bulletin of the finances of the largest cities of the world. The preparation of this was placed in charge of M. Josef Körösi, director

of the Statistical Bureau of Budapest; and the first Bulletin Annuel des Finances des Grandes Villes, containing statistics for the year 1877, appeared in 1879. The list of questions for this had been sent to some fifty cities of continental Europe, but complete answers were received from only fourteen. The tables showed for these fourteen cities the total receipts and expenditures, the detail of receipts from principal sources, the detail of expenditures for the most important branches of administration—as police, street-cleaning, education—, the value of municipal property, and the extent of their indebtedness. Figures were given showing both the total amounts for each city and also per capita. The cities were arranged in the tables in the order of population. The bulletin, containing the tables with explanatory notes, formed a pamphlet of forty pages.

Other issues of the bulletin on the same general plan were published annually for eight years, the fifth number including also synoptical tables for the quinquennial period. Twenty-six cities were represented in the second issue; but there was little further increase, the highest number included in any one year being twenty-eight. With the exceptions of Washington, D.C., and Providence, R.I., which appeared in some of the later bulletins, only cities of continental Europe were represented in the tables. The British towns were intentionally omitted on account of the important differences in their administrative system from that on the Continent.

After the number published in 1889 (containing statistics for the year 1884), the bulletin was discontinued on account of the insurmountable difficulties in the way of securing the data from a sufficient number of cities. No subsequent attempt has yet been made to secure a permanent international comparison of municipal statistics. More successful, however, have been the comparative statistics for cities within particular countries, this success being due in part to the greater influence of governmental over private action, and in part to the larger degree of uniformity in administrative systems among the cities of each particular country.

Both the French and Italian governments publish annually



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statements of the finances of communes, and summaries of these showing totals appear in the statistical abstracts for these countries. The summary in the French Annuaire Statistique gives only the aggregate receipts and expenditures for all the communes in each department, with similar aggregate figures, but no figures for any particular city, as to the amount of centimes additionels and the receipts from octrois. The summary in the Annuario Statistico Italiano gives only aggregates for the entire kingdom; but, in addition to the totals of receipts and expenditures, gives itemized aggregates according to a careful classification of receipts and expenditures. Thus the total expenditures for all Italian communes for general administration, for public works, for education, and the like, are given.

The facts for particular Italian cities are to be found in the Bilanci Comunali, published by the Ministry of Agriculture, Industry, and Commerce. The first number appeared in 1863, and, with few exceptions, it has been issued each year since that time, though with some changes in the system of classification. As now presented, there are ninety items of receipts, grouped together under ten main heads, and one hundred and seventy items of expenditure, grouped under eight main heads. The large number of items of expenditure is caused by the triplication of each item under each of the three divisions of obligatory, facoltative, and extraordinary expenditures. In accordance with this elaborate scheme the figures are given for all of the communes in each compartment, and also for the chief town in each province. The latter include all of the considerable towns in Italy, and there are thus presented for the comparative study of the municipal finances of these towns both detailed statistical data and the totals for the main heads of receipts and expenditures.

The arrangement and grouping of the figures can, however, be criticised. The towns are arranged in alphabetical order by provinces, with the aggregate figures for each province in alternate columns with the figures for the chief towns. Thus adjacent figures in the tables are not at all those likely to be compared, as would be the case were the statistics for the

large towns grouped in one separate series of tables having the towns arranged in the order of their population. Another disadvantage is the absence of any per capita figures or of any statement of municipal indebtedness. It is also clear that the value of the compilation would be much increased, were it to include, in addition to finance statistics, the most important facts of municipal equipment and the results accomplished by the various municipal departments. These would make clear how far differences in expenditure in different cities were justified by the different scope of work undertaken.

The Local Taxation Returns, prepared by the English Local Government Board, present a mass of information concerning the financial operations of the local authorities in England even more complete than that presented in the Italian Bilanci Comunali and the French Situation Financière des Communes. Such financial statements for the English Poor Law authorities have been prepared and published annually since the establishment of the Poor Law Board in 1834; but it is only since the creation of the Local Government Board in 1871 that returns from all the various local authorities have been collated.

The English local government system presents, in its confusing chaos of authorities, a striking contrast to the simple and machine-like administrative system in France and Italy. This confusion of authorities necessarily affects seriously the character of the financial statements. In consequence, the statistics of municipal finance cannot be found in one series of tables. Poor relief and public schools form distinct series of tables, and are entirely excluded from the municipal accounts; while the latter are not presented as a whole, but are sharply divided into borough accounts and urban sanitary district accounts. The county boroughs have still another division, known as the Exchequer contribution accounts. In addition there are in many towns special authorities dealing with specific municipal functions,—burial boards, baths commissioners, library trustees, market commissioners, bridge and ferry trustees, joint boards,-and the accounts of these are also distinct and independent of the municipal accounts.

This situation makes impossible the presentation of any figures showing the total municipal receipts and expenditures for particular towns; and, in fact, no attempt is made in this direction. But complete details as to receipts and expenditures for all the manifold fields of local governmental activity are presented, in which the ordinary financial operations are carefully distinguished from accounts dealing with loans and investments of capital. The arrangement of the large towns into three groups — county boroughs, municipal boroughs, and urban districts not boroughs—is an important step in the direction of a scientific classification; but within each of these divisions the arrangement is geographical. No per capita figures are given, nor are the financial statistics supplemented by other information concerning the operations of the various authorities.

In addition to the detailed figures for the many local authorities, tables of aggregates for the entire kingdom are appended. These show the total receipts and total expenditures by each class of local authority, the total receipts by all authorities from each of the principal sources of revenue, and the total outgo by all authorities for each of the important departments of expenditure. These, again, are differentiated into ordinary operations and those arising out of loan transactions.

Much the best collection of municipal statistics is presented in the Statistisches Jahrbuch Deutscher Stadte. This was first published in 1890, and has been continued at almost yearly intervals since, the last number appearing in 1897. It is prepared, not by the central government, but through the collaboration of statistical officers in the large cities, under the general editorship of M. Neefe, the director of the statistical bureau of Breslau. The Jahrbuch is composed of a large number of chapters, each dealing with a special field of municipal activity. Thus there are chapters on fire protection, street cleaning, street lighting, parks, charities, waterworks, baths, savings-banks, education, libraries, taxation, and other municipal functions. There are also chapters giving general information about city conditions, such as those

on local transportation, trade, shipping, post and telegraph business, population, dwellings, and even the classification of population by occupations and by incomes. The first volume contained seventeen chapters; but additions have been made in each number, so that, although every subject is not treated in each number,* the sixth volume has thirty different chapters.

Each chapter is prepared by one of the collaborating editors, who frames the tabulation schemes and collects the information from the various cities. The tables thus prepared, of which there are several on each subject, contain detailed information on the equipment of the various departments, of the amount of work actually accomplished, and of the financial Thus in the chapter on water-works there are tables giving the length of water mains (distinguishing the supply and the distributing pipes), the number of houses connected and the number not connected with the water pipes, the total water supply and its distribution for public services. municipal buildings, and private undertakings. Additional tables show the financial operations of the water-works,— the receipts from different sources, the expenditures for administration, maintenance, additions, interest, and amortisation of debt, with net results, distinguishing those for the complete transactions from those for ordinary operation. Everywhere, too, totals are supplemented by per capita and comparative figures. The other chapters present no less complete and interesting information concerning the subjects with which they deal.

The Statistisches Jahrbuch deals only with the cities of over fifty thousand population. The earlier volumes arranged the cities in order of population; but in the last number this has been changed to an alphabetical arrangement, which necessarily separates from each other the figures which are most likely to be compared. The single criticism which can be made on the work is the absence of any summary tables of receipts and expenditure. It is, of course, true that totals

Thus the subjects of Markets and Police have each been treated in but a single number. In the case of police this is probably due to the fact that in most of the larger cities the police force is not under the municipal government, but is managed directly by the central government.

of this kind are based on such different conditions in the various cities as to be unsafe for general comparisons; but it would be of advantage to indicate the total receipts and expenditures for the sake of completeness in the information for each city and for use in comparing development from year to year.

The Oesterreichisches Städtebuch (prepared by the Austrian Statistical Central Commission), the seventh volume of which appeared in 1897, presents just such a series of summary financial tables for fifty of the largest cities in the Austrian monarchy, arranging the cities in order of population. These summary tables, moreover, include not only statistics for the single year, but tables are given for each year of the preceding decade, thus making possible a rapid comparison of the development of municipal finances within that period.

In all other respects, however, the Oesterreichisches Städtebuch is distinctly inferior to the Statistisches Jahrbuch Deutscher Städte. Although the detailed figures deal only with twenty-two cities compared with fifty-five in the German work, it forms a much larger volume (700 pages as against 888); but there are no real comparisons of the various lines of municipal action. In place of chapters on the various municipal functions there are sections on each of the cities, each section being subdivided into various divisions. If the information for each city was complete, this method of arrangement would make the volume of little more use than a series of municipal documents for each city bound together in one volume. The student of comparisons must search through the volume for the facts of interest to him, and prepare his own tables from such figures as he may find. Further, the report for each city by no means gives such complete and detailed information as to all the various municipal functions as do the chapters in the German year-book. Population details (including the movement of population), educational statistics, figures of food consumption, and summary financial statements, are given for each city at length. In a few cases some other matters are included, such as poor relief and public lighting; but these are exceptional, and there is no attempt

to make the information for any city cover all the undertakings of the municipality.

The Bureau of Industries under the Ontario Department of Agriculture publishes annually a report on municipal statistics for the Province of Ontario. This gives the statistics of assessment and taxation (showing also per capita taxation), of receipts and expenditures, and of assets and liabilities. The municipalities are classified as counties, townships, towns, villages, and cities; and figures are given both for the separate municipalities and aggregates for each class. The classification of receipts and expenditures is not well adapted for comparative purposes. Several departments are often combined in one item - such as water-works and fire protection - a system which makes impossible a comparison of either of the factors thus united. Receipts from loans and payments for construction works are given separately in the tables; but they are included in the single set of totals for each municipality, so that it is not possible to compare the total ordinary expenditure of different cities.

Criticise as we may these foreign publications, we must not forget the fact that in every case mentioned the problem has been attacked with an appreciation of its importance, and that what has been done is far ahead of anything thus far accomplished in the United States. It is from a study of the results accomplished in other countries and by the adaptation of what is best in all that the Department of Labor may hope to prepare valuable information for the cities of the United States.

JOHN ARCHIBALD FAIRLIE.

MESSES. MACHILLAN announce for early publication the third and concluding volume of the *Dictionary of Political Economy*, edited by Mr. R. H. I. Palgrave. The successful completion of this large undertaking earns for the editor the gratitude of students of economics the world over.

THE house of F. Alcan, Paris, has published during the quarter an important contribution to the history of thought on philosophy and economics in the volume of letters exchanged between John Stuart Mill and Auguste Comte.

THE census office, concerning whose newly defined duties and organization Commissioner Carroll D. Wright gives information in another column, will have at its head, as director, Mr. W. C. Merriam, some time governor of Minnesota. The assistant director is Dr. F. H. Wines, who certainly fills the requirement made in the census act,—that he shall be "an experienced practical statistician." The act provides also for "five chief statisticians, who shall be persons of known and tried experience in statistical work." The appointees to these responsible positions, so far as announced, are Mr. W. C. Hunt, who will have charge of population statistics; Mr. W. A. King, for vital statistics; Mr. L. G. Powers, for agriculture; and Professor W. F. Willcox, of Cornell University, who will take part in general administration and supervision. Of these, Messrs. King and Hunt have already had valuable experience with preceding federal census enumerations, Mr. Powers has done excellent statistical work as labor commissioner in Minnesota, and Professor Willcox has an established reputation as a writer on statistical subjects. The appointments give the best promise of thorough work.

The whole subject of the scope and method of the census is discussed in the newly-issued publication of the American Economic Association on *The Federal Census*, a collection of

critical essays on the several phases of the enumeration, prepared by highly competent hands, and invaluable for all who would use the census material of the past, or may have to do with the collection of such material in the future. The volume is the result of the active work of a committee of the Association, of which Professor Richmond Mayo-Smith was chairman; and it has been edited by another member of the committee, Professor Willcox.

Another valuable addition to the literature on the census is in preparation, and nearly completed, in the shape of an exhaustive memoir on *The History and Growth of the Federal Census*, by Messrs. Carroll D. Wright and W. C. Hunt. It is expected that, with the sanction of Congress, the memoir will be published during the coming winter.

The Fifth Annual Abstract of the Labor Statistics of the United Kingdom, bearing the belated date of February, 1899, brings new evidence of the rare combination of scientific ingenuity and tact which enables the Commissioner for Labor to present this annual summary of a vast mass of heterogeneous details with the clearness and skill that make a public document appeal both to the trained student and to the ordinary citizen. Hitherto the Abstract has appeared in the late autumn, and has contained no information less than about ten months old. This further delay in publication is, therefore, in part, a useful innovation, inasmuch as it has made possible the addition of statistics for 1898 in the case of forty-two of the tables relating to current conditions of labor and employment.

Unfortunately, the tables devoted to workmen's organizations—trade-unions, co-operative societies, and friendly societies—give scarcely any information later than 1897; but they offer interesting statistical comparisons for a considerable series of previous years. It appears from these statistics that the total number of trade-unions in the United Kingdom rose steadily from 1,208 in 1892 to a maximum of 1,308 in 1896, and declined again to 1,287 in 1897. The total membership of these unions, on the other hand, steadily declined from

1,500,451 in 1892 to 1,404,898 in 1895, then suddenly rose in 1896 to 1,491,007, and in 1897 to 1,609,909.

Detailed analysis of one hundred principal unions, with a membership of 1,059,609 in 1897, shows during this period corresponding changes in financial strength, indicated by the fact that the funds in hand rose to considerably more than £2 per head at the end of the years 1896 and 1897. The lowest annual expenditure per member of these one hundred unions since 1892 was 25s. 8d. in 1896; the highest, 40s. 71d. in 1893, the amount in 1897 being 35s. 41d. The largest single item of expenditure is that of unemployed, travelling, and emigration benefits, which declined to the exceptionally low figure of 5s. 11d. in 1896, and rose again in 1897 to 10s. 24d,—a more normal figure for the period in question. Dispute benefit is second in size and importance, and necessarily varies much from year to year. During this period dispute benefit was heaviest in 1893 and 1897,—12s. 2d. and 8s. 21d. per member, respectively. It was lightest in 1896,—8s. 21d. Sick and accident benefits represented an expenditure of 5s. 1d. in 1897, oscillating about this sum for the whole period with remarkably little variation. Superannuation benefit, on the other hand, has crept up steadily from 2s. 83d. per member in 1892 to 2s. 111d. in 1896, and 2s. 101d. in 1897. Funeral benefit in 1897 called for an expenditure of 1s. 61d. per member; and this, again, shows almost no variation from year to year. Miscellaneous "other benefits and grants to members" vary largely from a minimum of less than a shilling per member in 1895 to 2s. 111d. in 1894. Finally, "working and other expenses" show an almost constant charge, closely approximating 5s. 6d., and reaching a maximum of 5s. 91d. in 1897. Such statistics sufficiently attest the strength and vitality of the trade-union movement.

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[Chiefly published or announced since January, 1899.]

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GRAZIADEI (A.). La Produzione Capitalistica. Turin: Frat. Bocca. 8vo. pp. 258. 4 fr. Gumplowicz (L.). Soziologische

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Comte et une Introduction par Levy-Bruhl. Paris: F. Alcan.

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OGILVY (A. J.). The Third Factor in Production, and other essays. Swan Sonnenschein. London:

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Stuttgart: J. H. W. Dietz. 8vo.
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GOLDSTEIN (J.). Die vermeintlichen und die wirklichen Ur-sachen des Bevölkerungsstillstandes in Frankreich. Munich. pp. 55.

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ECONOMICS

JULY, 1899

EXPANSION AND PROTECTION.

Our war seems to be over, and its consequences have begun. The change in our national policy which has agitated us so much, and which ought perhaps to have agitated us more, is an accomplished fact. We have crossed the Rubicon, perhaps unwisely, but beyond all hope of retreat. Some are terrified, and some are exultant; more, perhaps, are somewhat dazed. But all seem to realize that something portentous has happened, however much they may differ as to what it portends. In the present article I have no intention of passing judgment, either explicitly or implicitly, on the general policy of expan-The question lacks completely the one element necessary to command our attention. It is res adjudicata. All the discussion in the world will not undo what we have done or relieve patriotism of the obligation of acquiescing in the result, not sullenly, but sympathetically, as a condition of farther service. Wisdom may be retrospective, but it cannot be retroactive.

Of course, this may be interpreted unsympathetically, as an ignoble abandonment of principles in quest of popularity, an effort to keep on the winning side lest we be spoiled instead of spoilers; and it is possible to deserve such a criticism. He must indeed be a novice in the duties of citizenship who cannot accept defeat without shaking his convictions or share in victory without forgetting his misgivings. But the insistence upon convictions and the expression of misgivings, which are a duty while action is pending, become an impertinence when action is past.

I say so much at the outset because the purpose which I have in view will require some review of recent events, and the passions of the hour can easily divert attention from the real point. It should hardly be necessary to state further that but one among many consequences of our recent action, and not the most important one, is here dealt with. Any good or harm which expansion may do us in connection with protection may be much more than counterbalanced in other quarters. The considerations here advanced will therefore furnish no sufficient basis for judging the policy of expansion; and even within the narrower field they make no pretensions to completeness. My purpose is to be suggestive rather than exhaustive.

The events of the last few months will always be memorable as illustrating the rapidity with which changes of public opinion regarding the most firmly established principles of our national policy may be effected under favoring conditions. No article of our political creed has seemed more certain than the Monroe Doctrine, a modus vivendi between the two hemispheres founded on mutual recognition and forbearance. This was unanimously accepted by the American people until the first of May of the year 1898. And yet it was abrogated in spirit by this same people, perhaps as early as the first of June. This naturally suggests the question whether like surprises are

in store for us in connection with other principles which seem firmly established in the popular mind. Protection is certainly a chief citadel in our Zion. It has been attacked from the very first with the utmost energy and persistence by enemies of resource; yet, though sometimes sore beset and seemingly doomed to succumb, it has so far baffled its beleaguerers, and looks to-day more impregnable than ever. The protectionist of course sees in this triumph of his principle the recognition of its justice and the expression of a determination on the part of the people not to sacrifice its advantages; while the free trader sees in it the clash of class interests and the continual triumph of the shrewd and well-organized few over the short-sighted and unorganized many. Without ranging ourselves on either side of the controversy, let us note the principal incidents and characteristics of the struggle.

The American protective policy may be fairly ascribed to Alexander Hamilton. The reasons he assigned for his famous proposal were such as he thought would weigh with men whom he must persuade, but could not take wholly into his counsel. The reason which really actuated him may best be inferred from his policy, then misunderstood, but now seen to have been followed with marvellous singleness of purpose; namely, the consolidation of the American union and the development of the national consciousness. Financiers who were not statesmen have ridiculed his taxes, which scarcely paid the cost of collection and which produced little but irritation. But Hamilton knew what he was about. The excise taxes kept the fact of the federal government conspicuous before men who were inclined to forget it, and roused petty rebellions which gave a welcome opportunity to display federal authority; while the import duties accomplished the same purpose by emphasizing national boundaries and increasing that national isolation which Hamilton

and Washington strove to wrap like swaddling-clothes about the infant nation. With all their efforts, they achieved but a meagre and precarious success until the three years' war with England re-enforced their efforts, and, by its artificial isolation of our industries encouraged investments which protective legislation was afterwards invoked to perpetuate. Then came forty-five years of half-hearted and vacillating protection, followed by another war which again cast the sword into the wavering scale. Since then the policy thus firmly established has had but a single brief reverse.

Whatever economic and other arguments may have influenced this development, there can be little doubt that it has been intimately connected with the growth and consolidation of the Union and the development of the national consciousness. Our jealousy of foreign interference and foreign connections, our provincialism and self-sufficiency, have made the principle of America for the Americans a most congenial one in all connections. has profoundly affected the national imagination, and established a taste for isolation, a predilection for those arrangements which consist with national independence and selfsufficiency. It is surprising that those who have so long debated the question of protection have shown so little appreciation of the fact that they were addressing a biassed jury. Urged to open their ports to the world's commerce. the people have rejected all demonstrations of economic advantage with seemingly incorrigible prejudice. are loath to believe that such an arrangement would be to our advantage; but, if it were, it is not to our taste." Such an answer would epitomize the traditional American attitude on this subject. It exasperates the economists, at least those among them who unconsciously exalt their exposition of self-interest into a philosophy of human conduct. Looked at from the standpoint of our national situation and our national necessity, it is perfectly intelligible, and of course in its time and place justifiable. began our national life with a dangerous lack of cohesion, and have passed through more than one crisis which we can hardly look back upon without a shudder. The insurance of national stability was infinitely more important than the insurance of larger dividends. How are nations solidified? By calculations of co-operative advantage and acts of incorporation? Never; but by the growth of sentiments of preference for one another and of relative dislike or disdain for outsiders. It must never be forgotten that those sentiments which hold nations together, when regarded in their character of reasonable judgments, are mere prejudices. This does not prevent their being both useful and necessary. It is but a prejudice that we esteem our wives and our children to be better than other peoples'; but woe to the integrity of family life, when these prejudices lose their hold upon us! The first thing in the formation of nations is therefore, not the development of the most appropriate industries, but the development of the most appropriate prejudices.

The rôle of national prejudice is far greater than is usually supposed; and it affects the action of classes usually believed to be quite exempt from its influence. It is generally assumed, for instance, that business men, the shrewd organizers of industry, are little influenced by sentiment, and that, wherever they see a chance of profit, there they will go. It is doubtless true that sentiment in the ordinary form, of the sort recognized and rather disparaged as such, finds little place in the business man's ordinary calculations. If he sees an opportunity to make money, he is not likely to be deterred from taking it by considerations of charity or patriotism or religion. Not that every business man will ignore these considerations; but some will always be found to do so, and therefore we are justified in assuming that, wherever there is an obvious chance of profits, business will go.

But this is very different from saving that, wherever there is a chance of profits, business will go, simply because not all chances of profits are obvious chances. And one of the great factors in determining whether an opportunity is obvious or not is the national prejudice, or, if we prefer a less disparaging term, let us say the prevalent culture, ideas, and temper of the nation. This is perfectly apparent when we consider nations far removed from us. For instance, the Chinese have possessed in their coal-fields an inexhaustible source of wealth; but, though they have known that the coal was there and known that it would burn, they have made little use of it. In their own way their business men are vigilant and enterprising, but they do not turn their enterprise in this direction. The reasons are fairly characteristic. Even the fear that, if holes are dug in the ground, the old dragon will escape and devour them, is not wholly without counterpart in more civilized communities. But the real reason is that there are difficulties in the way of utilizing coal which can only be overcome by centuries of patient experiment, necessarily presupposing a very deep and widely diffused interest in the problem. A single individual has neither the time nor the means for such a task. Above all, he is too dependent on the prevailing currents of social opinion to turn his energies persistently in a different channel. And the general direction of Chinese industrial development has not been such as to bring to this problem an attention sufficient for its solution. The business man is, after all, but a variation upon the national type. He cannot be independent of the flood of suggestion which pours in upon him from every side, stimulating his imagination and shaping his ideals. Still less can he ignore the concrete rewards and penalties which society metes out to his The industrial explorer never travels far without a commission from society. Opportunities do not lie around like manna, to be had for the taking. They are locked fast and hidden far away in nature's labyrinth, and only after many failures and the combined efforts of whole industrial groups are they brought to light. An "obvious opportunity" is not an accident of nature, but a social achievement.

American enterprise is no exception to this principle. Our business men are as enterprising as any in the world. Their energy and intelligence in the competitive struggle have made our industrial progress unparalleled in history. And yet outside the field upon which national attention has been directed they have shown an apathy and shiftlessness almost incredible. South American trade has long offered a tempting field, if profits alone could tempt, but a field which requires study, and adaptation to conditions and prejudices unlike our own. Americans, famed at home for their power to discern the slightest whim and flatter the subtlest sensibilities, have scarcely made a serious effort to enter this inviting field.

But this seeming inconsistency in the conduct of clear-headed men is explained by the necessary subservience of the individual to collective ideals and judgments. Our attention as a people has been introspective, and the national imagination has necessarily developed in this direction. In fields where the nation has had little interest and less sympathy, the national imagination, and that of our industrial leaders as well, have remained dormant and uncreative. The appeals of economic reasoning have been seed upon stony ground.

This has been conspicuously true of our protective policy. It is the commonest thing in the world for the protectionist to concede that the free-trader's position is logically unassailable, without feeling called upon in the least degree to alter his own belief or action on that account. He is a protectionist because that policy is attuned to his national instincts and to the way of viewing things and doing things with which he is familiar.

This reason being too fundamental, too much a part of the constitution of his universe, to admit of formulation, he formulates others which are of little consequence to us. and in an emergency of little consequence to himself. am not saying that there are no economic arguments for protection, but simply that it is not these arguments that have made Americans protectionists. If these arguments ran counter to the general currents of national feeling and intellectual habit, all the infant industries and pauper labor in the world would not commend this policy to us. If accident had made us free-traders, the case would have been essentially the same. We should have had a policy based on instinct and intrenched in prejudice; that is, in feelings which were the outgrowth of special conditions, but which would have seemed to us laws of nature. And, overlooking the true grounds of the faith that was in us. we should have devised a superficial and sophistical justification for it, and should have gone blandly on when its superficiality was exposed. The fundamental social incentives are unconscious, and hence popular explanations of social phenomena have but a partial and fortuitous validity.

We can both illustrate this important principle and advance another step towards our conclusion by glancing briefly at the events that ushered in our recent change of policy. They were characterized, as has been said, by extraordinary precipitancy in decision and action, and by the most striking changes of conscious attitude and popular argument. We went to war because we felt like it, because our blood was up and our patience exhausted. In deference to a natural instinct, we put our best foot forward, and faced our critics and our consciences with the most presentable, if not the most potent, of the incentives by which we were consciously animated. We were waging "a war of humanity." To enforce our point, we even made certain remarks about "criminal aggression," which were perhaps unfortunate. The argument was shallowly sin-

cere; that is, as sincere as any argument can be which is based on the diplomatic instinct and a completely inadequate analysis of our own impulses. That we then had no thought of annexation is doubtless true; for that was several months ahead, and for a future so remote we had few thoughts of any kind. But when we got to the Antilles and the Philippines, we felt like staying, and so we stayed. Recollections of "criminal aggression" would have troubled us if we had thought so far back, but we seemed as little inclined to think backward as forward. A few more sensitive spirits thought that humanity required us to keep the Philippines, but most Americans had more sense of humor. Other things now appealed to the imagination,—national honor, "Old Glory," new markets,—and we frankly owned their sway.

The significant thing in all this is the way it was brought about. Let us imagine that, instead of fighting with Spain, we had remained her friend, and as a mark of favor she had offered to sell her distracted colonies to us. in preference to other customers, for one or two hundred millions.—a fraction of what the war has cost. Such a proposition would have presented to the hard-headed calculator every inducement which the present arrangement offers, and many others. We should have had the territories, the coaling stations, the markets, the patronage, and the prestige which we now anticipate; and we should have less national debt and less pensions and soldiers' graves. If the present bargain is a good one, the other would have been several hundred millions better. How long would it have taken to persuade the American people to make such a purchase? The answer is perfectly easy. No possible demonstration of advantage would have secured for the question even a passing interest. The possibility of an enlarged foreign commerce and of an Anglo-Saxon federation, to a people jealous of foreign competition and traditionally suspicious of Great Britain, would have been positively repellent. Coaling stations in the Orient would have been looked upon as necessary only to a navy which we did not need, and which would become an artificial necessity as soon as we had these same coaling stations. The foreign commerce thus secured would never be worth the cost of political control, and could be as well secured without it. And so on indefinitely. These arguments may all be fallacious; but they would all have been plausible, and, as everybody knows, were so, up to a very recent date. All the arguments that could be urged in favor of the purchase of the Spanish colonies would never have sufficed to bring the matter to a vote in Congress.

And it is not these arguments that have induced us to enter upon the far worse bargain which we are about to make. The talk about acquiring new markets and extending the benefits of American civilization to inferior races is the veriest sham. Something may be accomplished in both these directions; but we have not a particle more proof of it now than we had a year ago, when we should have flouted the argument. By virtue of what discovery or revelation have these considerations acquired such sudden mastery of our judgments?

The answer is of the utmost importance to our inquiry. It is not that these considerations have acquired new character or importance, but that a change has taken place in the unconscious forces which control our action, such that arguments which we formerly found it congenial to ignore we now find it convenient to emphasize. The people who a year ago would tell you that our home markets were worth more than those of all the rest of the world now talk as if the Tagals were customers whom it was worth any sacrifice to secure. They did not know before and do not know now anything definite about the value of either, nor does the action they urge have any necessary relation to the end they seek to accomplish.

They feel differently now: that is all. The argument that has won them is the booming of Dewey's cannon, the sinking of the "Merrimac," and the planting of the stars and stripes on the hill of San Juan. These have stirred that instinct of domination slumbering in every people which has achieved supremacy in the age-long struggle for existence,—an instinct without which it would not have been and without which it would cease to be. The instinct to grasp and subdue and control may, in times of peace, be dormant or manifest itself only in milder forms. apply the proper stimuli, give vivid and dramatic suggestion to the imagination, and the forgotten impulse will awake to sudden life and go tingling out to the very finger-tips. To minds in this state of exaltation, arguments appeal, not in proportion as they are reasonable, but in proportion as they are dramatic and striking.

The recent war, however insignificant in military importance, has exceeded in dramatic interest any war of modern times. When the lion within us was showing signs of waking under the gnat-like irritation of Spanish imbecility in Cuba, there came the destruction of the "Maine," the most dramatic event of its kind in the century. lion sprang up with a roar, and tugged at his chain. proposal of arbitration was not the least imbecile of Spain's transactions. Not that arbitration was unreasonable, but that it was impossible. The most superficial knowledge of human nature should convince us that there are moods which nothing will placate except instant and prone submission, and crimes which nothing will expiate save a dire and visible penalty. Then came a series of short decisive engagements, remarkable quite as much for the folly of the enemy as for the skill of our arms, but peculiarly adapted to appeal to the imagination. We have drunk of a wine to which we are little accustomed, and our intoxication is the more complete because of the unwonted indulgence.

What is the supreme result of this war? I believe it is to be found, not in new territories or new problems and institutions, but in a new direction of the national imagination. The introspective period is over, and the attention and interest of the people are turning powerfully outward. This is at bottom an emotional change, a change of sentiments or prejudices. It expresses itself, as usual, in intellectual terms and under the guise of reason and deliberation. Arguments long in disfavor are sought to do sudden duty, all because the nation has experienced "a change of heart." Whether it will be permanent or not will depend, as in all such cases, upon the pressure of environing conditions; but for the present it is a reality.

What effect will this change in the direction of the national imagination have upon protection? Only one answer is possible: it must lessen its hold upon the popular mind. As momentary phases of political policy, protection and expansion may be combined; but, as expressions of national temper, they are incompatible. If it be true, as I have contended, that American protection is due primarily to the American temper, and that economic arguments which utterly transcend the ordinary intelligence are a product of the policy rather than its effective cause, then we must conclude that a change in the direction of the national imagination which makes remote regions the subject of general and eager attention, to the temporary disadvantage of home interests, must react upon men's inclinations and action; must modify their reasoning, raising some arguments to honor and consigning others to disgrace; must change, in short, our industrial policy. The change will not be as rapid or as complete as that in connection with the Monroe Doctrine, because no such dramatic incidents are likely to impress the imagination; but the direction of the change cannot be doubtful.

To this general consideration are to be added others, less important, but more concrete. Chief among these is the necessity of dealing with the Spanish tariffs in our new dependencies. They have a very ugly look; indeed, all tariffs have, when looked at from the outside. must be confessed that these Spanish types of the genus are peculiarly calculated to offend our sensibilities. immediate reduction is conceded by all to be a necessity, and free trade between us and them is certainly a possibility. If Manila should be made a free port in the interest of that general Asiatic trade which is destined so greatly to exceed that with the Philippines themselves, and should develop a trade like that of Hong Kong,—if these and other possible changes, all necessarily in the direction of freer trade, should further or seem to further general prosperity, the influence of such an objectlesson would certainly be unfavorable to protection.

Hardly less important than our dependencies must be reckoned the influence of our new relation to Great Britain. That country, with great sagacity as well as real sympathy, has utilized the recent occasion to ingratiate herself to the utmost with the new power whose speedy development she has foreseen. It is not certain that we needed her help at any time during the recent war, but we knew we might have needed it, and felt sure we could have it if we did. The fact that other nations felt this, too, is probably one reason why the help was not called for. That is to say, England did help us in a most effectual way, and is rewarded with our genuine and, let us hope, durable friendship.

But, it will be said, friendship does not necessarily mean free trade. England's own colonies, even the most patriotic, do not have free trade with the mother country, and, with a single recent exception, do not grant her any preference. How can she expect more from us? Logically, she cannot; but logic has not much to do with it.

Anglo-American friendship must react in many ways on our commercial policy. England is the great objectlesson of free trade. No other developed people ever tried free trade long enough to eliminate the factor of transition disturbance, and really test it. The prosperity of England, though by no means altogether due to free trade, was at least proof that free trade did not mean certain ruin, and was certainly a powerful argument in favor of that policy. Of course, such an argument had the same logical value before the friendship as after; but it had not the same emotional value, and it cannot be too often insisted that this is the all-important consideration. We have but to recall the part which hatred and jealousy of England have played in all tariff discussions, to appreciate the change which friendship is likely to effect. Who does not remember the cartoons which represent John Bull, fat and patronizing, dictating terms to meek Brother Jonathan and his family; and then, in contrast with this consummation of free trade, the exultant protectionist ideal, in which Uncle Sam, proud and disdainful, turns away from the hungry suppliant in whose emaciated features we still recognize John Bull? Newspaper editorials and campaign speeches and tracts by the million have pointed the same moral and appealed to the same prejudice. Doubtless the argument never appealed to the highest intelligence and the most generous spirits of the country, but its power over the popular mind from first to last is beyond question. It is hardly too much to say that to many the fact that a high tariff was likely to displease and injure England was quite as strong an argument for enacting it as the prospect that it would benefit ourselves.

Something of this same spirit is to be seen in the formula in which a prominent protectionist has expressed what he conceives to be the protectionist plan of campaign: "Find out what your enemy wants, and then

don't do it." It is certainly significant that this assumption of necessary hostility between trading nations should have passed unchallenged. Everybody knows that merchants do not lie awake nights, thinking how they can do what their customers do not want them to do; and popular logic might have been expected to see a certain analogy between the two situations. Why has it not done so?

In international trade, as we all know, nations are related to one another in two ways, - as customers and as competitors. The first relation is essentially one of friendship, based on mutual advantage. The second is one of hostility, growing out of opposing interests. We try to please our customers and circumvent our competitors. It is often difficult to determine the relative importance of the two relations in a given case, but both are usually obvious enough. Why, then, do people see only the one? The answer is that they are influenced by other considerations. They see what they feel like seeing, and overlook what they find unfavorable to their prejudices. There can be no doubt that feelings engendered in other connections,—political, religious, and the like,—greatly affect the imagination and judgment in economic matters. The nation which we hate will be remembered as a competitor; and we shall feel inclined to injure its trade by withdrawing our own custom, however doubtful the result to ourselves. The nation that we love, on the other hand, we shall remember as a customer, and court accordingly. We have seen that the influence of our traditional dislike for England has been conspicuous in all previous popular discussions of protec-On the other hand, the effect of our new-found friendship is already apparent in the negotiations with Canada. Reciprocity with Canada is no more sensible now than a year ago, but it is far more popular.

Our relation to England will react upon our commer-

cial policy in another and entirely different connection; namely, the general Oriental policy to be pursued by both nations. Our trade with the Philippines cannot but lead to an enlarged trade with Asia; and, as we shall hardly be able to extend our political control to the mainland, we shall have every reason to support the policy of the open door. Tariff barriers that would only narrow the trade of other powers would wholly ruin our own. No doubt it is physically possible for us to support a policy abroad - of course with free-trade arguments which we reject at home; but such a position would not be a strong one, and could not fail to react upon our home policy. Finally, the relative free trade between ourselves and our dependencies must put the pauper-labor argument to a severe test. The ten or twelve millions of new citizens or wards thus acquired are as pauper as could be wished for the experiment. If they ruin us by their industrial competition, we shall all be convinced. If they do not, the protectionist will lose his trump card. are certainly enough of them to settle the question.

We need not proceed farther in the enumeration of special influences which will occur to the thoughtful It is sufficient to note that they all tend towards freer trade. The very growth of foreign commerce itself, from whatever cause, tends to create powerful and organized interests, restive of commercial restraint and forming a hitherto lacking counterweight to the closely organized manufacturing interests which have so successfully supported the policy of protection. Whatever may be the potency of these forces individually, there can be little doubt that in the aggregate their influence will be very great,—more than sufficient to tip the scale in crises such as we have had more than once, and are likely to have again. It is no part of my purpose to inquire whether such a change of policy would be beneficial or not; I have confined myself to the bare question as to the mode in

which recent political events are likely to affect our commercial policy.

In conclusion, it may be well to inquire how far these changes might have been effected without these events. Those who are opposed to both expansion and protection. and therefore unwilling to exchange the one for the other. often assume that the latter was quite unnecessary. friend writes me that he is in favor of expansion, but believes it should be commercial rather than political. It is constantly argued by opponents of expansion that the acquisition of colonies is not necessary to the development of a foreign commerce. Physically, this is perfectly true. Our best foreign markets must always be countries which we cannot annex; and there is no logical reason why all our markets should not be so. But. to repeat, the question is much less a logical than a psychological one. We might adopt a policy of commercial expansion, and reject political expansion, if we had a mind to; but should we ever have been a mind to? It is doubtful, to say the least. Historically, the two policies seem never to have been separated, which suggests that they may be different manifestations of a single impulse, and so inseparable. England sells goods wherever she can. But she also plants her flag wherever she can. This has been largely a commercial necessity, no doubt; but it has been quite as largely a psychic necessity, a mere reflex action of the energetic and assertive temper which is the secret of her commercial success. Perhaps this is another case of the foible that is bound up with strength; and it may be that evolution is preparing a race which, by choosing the better part and eschewing the bauble of political domination, will be able to inaugurate a better era. But there is not the slightest reason to believe that we are that race. In vain the prophet of commercial expansion adjures us to fling away ambition and in meekness to inherit the earth. He convinces, but he does not persuade. He has appealed to an impotent reason and ignored an omnipotent imagination. A policy of commercial expansion, involving, as it must, transition disturbance and hardship for many who are unable to anticipate its ultimate benefits, will not win favor if bereft of those showier adjuncts which dazzle the imagination and appeal to the primitive instincts. The man who begins a compaign against bosses and the spoils system by leading a charge against the Spaniards in Cuba may be very illogical, but he is the man whom the bosses dread.

These conclusions may seem to be disparaging to democracy, but I do not feel them to be so. Democracy is government based upon the popular will, not government based upon the popular wisdom. The intellectual initiative, the power of exact analysis and large foresight requisite for the guidance of society,—these have ever been and must ever be the contribution of the few. The problem of democracy is now as ever how to enforce the wisdom of the few by the will of the many. It need not disturb us to discover that the many are moved by other considerations than those which influence the few. Here as everywhere there is law, and we govern by learning to obey.

H. H. POWERS.

ON THE VALUE OF MONEY.*

THERE is an impression abroad that it is possible to formulate a statement as to the value of money in various ages of the distant past, and in this manner to get a rough and ready method of comparing the corresponding classes in different periods as to their command over the comforts and conveniences of life. Sunday-school manuals contain statements as to the value of a penny in the first century at Jerusalem; and careful historical students will sometimes give encouragement to the popular demand for information on this point, by estimates of the value of a pound sterling at the time of the Domesday Survey. There must be a wide-spread conviction not only that this comparison can be drawn, but that lecturers on economic history are always prepared to make it. I have tried to insist to various friends, who ask me such questions as, "What was the value of a shekel in the time of Esarhaddon?" that the problem cannot be solved. In the present paper I hope to show why the inquiry, in the form in which they expect me to engage in it, is hopeless.

It is, of course, quite possible to compare the amount of money that was in the possession of some person at some time with another sum at another time; that is, to compare two masses of the same precious metal at different times. We might, if we had the data, compare the amount of the treasure saved by David for building the Temple with the amount of treasure accumulated by Henry VII. or the amount subscribed at the foundation of the Bank of England. That is a mere physical comparison of the weight and fineness of two masses of metal. Or, again, we may compare the ratio of two known commodities to one another,—of gold to silver or of incense to

^{*}A paper read before the Harvard Historical Society.

This is a way of estimating silver in different centuries. the relative plenty and scarcity of two commodities as compared with one another; and it may throw light on the circumstances and commercial connections of various peoples and on the opening or working out of different mines. But such an inquiry does not give us the value of money,—the ratio of exchange between an ounce of silver and commodities of all sorts, the general purchasing power of the current coin. This latter problem can be discussed for different countries or districts in the present day. To say that we can live cheaply in Cornwall is to say that the purchasing power of money is high there: prices are low, and you get a great deal for your money. To say that in California a dollar only goes as far as a shilling does in England is to say that silver there has only a quarter of the purchasing power. comparison can be easily and practically made, for people with formed habits of life and definite requirements know how much money they must spend to maintain the same standard of comfort in the two places. There is a definite means of comparison.

It is easily conceivable, however, that we might get very different statements as to the purchasing power of money in England and in India from two men who had different standards of comfort. The English official in India thinks it necessary for his standard of comfort to ride and shoot and go to the hills in the hot season: his brother at home may regard many of these things as luxuries rather than necessaries, and the English artisan in India does not include them in his standard of comfort at all. Three hundred pounds a year in India is probably better than three hundred a year at home, to the bachelor official; but one hundred a year in India is immensely better than two pounds a week to the English artisan. The relative value of money in India would be differently estimated by an official and an artisan. The one would say it was a little

higher than in England; the other might put it at about double. Hence it follows that you cannot even for the present day give a precise answer as to the difference in the value of money generally in India and in England. Unless there is a known standard of requirement or standard of comfort to serve as a basis of comparison, we get no result. We cannot make the proposed comparison with the time of William the Conqueror or Esarhaddon in general; it is reasonable only to discuss the purchasing power of money to two men with precisely similar requirements then and now. The similarity of requirement must be present—or, to be technical, the effective demand for goods must be the same—or we have not a common standard by which to measure the purchasing power of money.

From this it follows that, as between persons or times where there is no common standard of requirement, there can be no direct comparison as to the value of money. The requirements of similar classes may change greatly in a few centuries, since the time of Henry II. If one tries to take the closest comparison possible and to picture to one's self the difference between an informal discussion of some literary topic at an English university now with a similar talk six centuries ago, we may feel the inevitable differences. The proceedings six centuries ago must have been a trifle dingy; they were not illuminated by electric light or much artificial light at all; they did not open with the reading of a paper, for writing materials were too precious to be wasted in literary trifling. The English college men of that time may have been more extravagant than their successors to-day, but they had no idea of making themselves comfortable. They had no arm-chairs and no carpets, no tea or coffee or cigarettes. Their muffins, if they had them, were bad. It is unnecessary to go into further detail to show that their requirements and ours are not commensurate, and that it is absurd to pretend to measure them in terms of money.

There is a danger lest economists in the present day should forget the truism that value, even the value of money, depends on supply and demand; and this demand must be effective demand, - not a vague dream, but the actual willingness to sacrifice some definite thing for the sake of obtaining money. Unless an object is more or less within your range and reach, this effective demand cannot exist. In a condition of natural economy,—the condition which was dominant in Europe so far as the masses of the population are concerned from the fifth to the fifteenth century.—money could not be an object of effective desire; for most men it was practically out of reach altogether. Monetary movements there were, but they did not touch the ordinary routine of peasant life; and hence it is impossible to use money in any way to measure what their condition and requirements were. is only in a time of money economy, when coins are within the reach of ordinary men, who expect to be paid in silver, that it can possibly give us any evidence as to the standard of comfort of the ordinary man. It may be possible to compare the weaver of the fourteenth century with the weaver of to-day, but it is hardly possible to compare the agricultural laborer of to-day and his analogue five centuries ago through the medium of money. To do so is just as absurd as to apply modern standards of intellectual development. We are often told about the low intellectual standard in some towns, as evidenced by the books that are sought for in the free libraries. This sort of standard would be ludicrous if we attempted to apply it to an age when reading and writing were not common accomplishments. There were mediæval men of great mental power and subtlety who did not read or write much. Possibly, they had solid arguments because they neither read nor wrote, but thought the more.

Granting, however, that many persons live and have lived outside the range of this monetary circle, it is still

true that money has been used more or less for all ages of the world's history. And it might appear possible to find some commodity which is so far stable in value that it can be used to measure the variations in the value of money. The commodity usually proposed is wheat, and it may be better than any other. But, if we use it in this way, we should at least be clear as to the assumptions that we are tacitly making.

There are two minor but obvious points. We assume that wheat is wheat all the world over and at all times of the world's history. My impression is that wheat is not a fixed thing, but varies in quality considerably. Are we sure that the wheat in the time of Henry II. had the same sustaining power per bushel as wheat has at present? It may have had, but I am not sure: I note it as an assumption. We assume, further, that we can, by a system of averaging, discount the uncertainty which arises from the differences of good and bad years, and thus state a usual or fair price. When we have a regular series of quotations for a long period, that can be done: when we have only occasional quotations, we cannot be sure that we are striking the average rightly.

But the really fundamental assumption is that the value of wheat from century to century is stable. Wheat is said to be the common food of the people; and hence it appears that the demand for wheat is less likely to vary than the demand for any one article of mere taste and fancy. But wheat is not the common food of the people of the Highlands, or of the people of Ireland, or of the people of South Africa, or of the people of India. And the demand for wheat in these areas must be of an entirely different character from the demand in England. But is the demand for wheat constant even in England? Is it unaffected by the growth of population? Is it unaffected by the varieties of food-stuffs we now have, and the opportunity for a mixed diet? I cannot answer these questions; but we ought to answer them before we vent-

ure to take the value of wheat as a standard in terms of which we can measure the variations of the value of money.

If, on the other hand, we admit that the demand for wheat is variable, we may of course argue that there is a prearranged harmony by which an increased supply is forthcoming in such quantity that the value of wheat does not rise, even when there are more mouths to feed. But this brings us face to face with the law of diminishing return from land. Personally, I do not believe that either the demand for wheat or the supply of it or the value of it is in any sense stable, or that it can be usefully employed as a standard for gauging the value of money. At the same time a method of concomitant variations might come in. If you have three or four countries where the common food of the people is different,—say rice, wheat, maize, and potatoes,—if over a sufficient period of years the variations in the price of each of these in the country where it is used as food correspond with the variations of the price of the common food in other countries, there would be a strong presumption that we could trace the rise or fall of the precious metals in value during that period. Over a sufficient area and period and with known conditions of population, we might treat the common food of the people as stable in value, and thus have the means of estimating the changes in the value of money as indicated by this test; i.e., from the standpoint of the masses, not the classes. If this method could be applied for the last hundred and fifty years, it would help us to bridge a gulf which renders other methods of comparison impossible. To these I will briefly turn.

We may be able to get an instance of a demand for goods of many kinds, which recurs in a very similar form after a long lapse of time, and institute a comparison between the money expenditure involved in the two cases. Supposing that there has been little change in the arts of life, the test seems to me fair.

For example, take the cost of fitting out an expedition by sea, for say one thousand men. The requirements would not be very dissimilar at the time of the Sicilian expedition, Pompey's campaign against the pirates, Saint Louis and the Crusades. Certainly, the differences at these periods in the requirements of the admiral for his fleet would be trivial compared with the demands made in fitting out a fleet to-day. If we can treat the requirements of the admiral per thousand men as practically similar, we may say that the outlay demanded for this purpose at each date gives a means of estimating the changes in the value of money from one period to another. Or, again, it may be possible to take a peasant holding of thirty acres, with the stock, at two different periods, and to compare the price it would fetch. If there has been little change in the art of agriculture, the requirements at the two dates may be supposed to be closely similar. It is by taking concrete cases where the things required are similar, and treating. them as a demand for money for a given purpose at two distinct dates, that we can best estimate the changes in the supply of money which may have occurred in the interval, and hence get a conclusion as to its value.

To my mind the best hope of solving the problem, so far as it is soluble, is by extending the inquiries of Le Play and collecting family budgets for persons in similar condition at different dates,—the proprietor of six hundred acres or the tenant of thirty. We shall then get a statement as to the changes in the value of money to some class or for some purpose. But we need never hope to get information as to the changes in the value of money generally, except when we confine our investigation to short periods, in which there is no real change in the arts of life, in the composition of society, or in the tastes and requirements of its members.

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THE student of economics cannot remain unaware that his is a realm bordered by other realms. He pushes his inquiries as to the rôle of nature in production, and lands in economic botany or zoölogy. He goes deeply into the subject of labor, and finds himself studying physiology. He undertakes to reach the basis of rent, and, ere he knows it, is poring over the bulletins of the experiment stations. The principle of division of labor takes him into technology. Transportation drives him to the law of carriers. The study of property involves him in jurisprudence. International trade or monopoly conducts him to political science. Consumption, with its study of wants and choices, is a short cut to ethics. Now I wish to raise the question, "Is there not a field of investigation lying up against economics which, although social, is yet not jurisprudence or political science or ethics?"

The theory of population betrays such a field. At first Malthus wrote of man and his increase much as Darwin might have written of rabbits. But later he made more of the "preventive check"; and out of this grain of mustard-seed has grown a flourishing tree. The recognition of the fact that custom, by regulating the age of marriage, the plane on which housekeeping shall begin, the comfort in which children shall be reared, and, even in a general way, the size of the family, has a good deal to do with the increase of population,—all this has sprung a host of questions which economists wisely forbear to answer. Whence come these standards? Who makes them? Do they change? Do they respond to economic changes alone or to manifold social changes? Is there wisdom and adaptation hidden away in them? If so, how

did it get there? What makes a man conform to them? What happens, if he does not?

We are beginning to see that a check much more effective than a definite standard of comfort is universal ambition and the pressure of new wants. Malthus made much of "moral restraint." But how about egoistic restraints? How, if people are keen-witted enough to realize that, the more babies, the fewer beefsteaks, bicycles. and outings? Will not the size of the family be affected with the rise of a furiously competitive democracy where strict class lines have been swept away, where old contentment is gone, and everybody is straining every nerve to get a little higher in the social scale? Or suppose the value of woman rises. Will not the keener appreciation of her burdens in child-bearing and child-rearing be a check to numbers? Again, how is the size of the family affected by the ambition of women to be something else than mothers and household drudges, by the higher education of women, by the opening of the professions to them, by the adoption of rational dress?

Besides the fact that society, as it becomes more democratic, whets the eagerness of parents for pleasures and luxuries that are incompatible with large broods, there is a further complication of the problem of increase by different ways of starting children in life. Taine describes France under the old régime as a series of staircases separated by landings. One could elbow his way upward on his own flight of steps; but he did not expect to invade the staircase above. Besant describes the English professions as pleasant parks, guarded each by a turnstile where a thousand pounds is demanded of the lad who would enter. Now in a stratified society, where in general a man is content to bring up his children to his own trade and manner of life, the restraint on numbers will not be so strong as in a society stirred to its depths with hope and ambition, where to talent equipped with knowledge all doors are open, where higher education is not difficult of access, and where the competition of parents to get their sons on in the world has made schooling needful in the battle for life to an almost preposterous degree.

The question of population is not the only one that ramifies into a region not economic. The writer once undertook a study that should bring to light the forces that fix the time of labor. There is, of course, the physical limit, at which the arm refuses to lift the pickaxe and the eye to follow the stitches. There is the psychical limit, at which the pain of further toil becomes intolerable. There is the technical consideration that prolongs the labor-day of those engaged in the hotel, railroad, street-car, restaurant, theatre, and cab services. There is the objective economic consideration, which stops labor when further strain will impair to-morrow's work. There is the subjective economic limit, at which the disutility of another quarter-hour of labor exceeds the utility of that quarterhour's product. And this inverse relation of hours and reward of labor is found to prevail through the whole social gamut, from bank presidents and theatrical managers to cobblers and charwomen. Then there is the fixing of the length of the labor-day by this consideration working through a body of men, as in a factory. The day's limit is the consensus of the trade, as in bricklaying, or of some other trade, as in hod-carrying.

So far, so good. But, when the writer began to inquire what fixed the days of labor in the year as well as the hours of labor in the day, new and lawless forces were encountered; and the essay on "The Time of Labor" was never written. Why are there fifty-two holidays a year for almost every kind of labor? Why should this quota of rest-time be reserved for the destitute as well as the comfortable, in bad times as well as in good times, in poor societies as well as in rich communities, in cold

climates as well as in hot climates? How is it that the six-day period of labor introduced by the duodecimal Babylonians among the state slaves employed on public works, in order to prevent their being driven to death by their taskmasters, has come to be universal in the Western world? Is it tradition, belief, or expediency that upholds this stupendous institution, disposing as it does of oneseventh of the time of man with an authority certainly more than economic? If the last, is it valued for its uses in this world or for its bearing in the next? Is it primarily for the good of the man who is told to rest or for the benefit of the society that bids him? Is it a hygienic measure to guard the vigor of the race, a socialistic measure to compel the capitalist to furnish the laborer seven days' keep for six days' work, or a police measure intended to fortify a religion that is considered indispensable to the existence of social order?

Again, take the twin pillars of exchange,—security and probity. Security is of course explained by what political science can tell us of law and of the state. But whence this probity? Is it an individual quality, like color of eyes? Or does it vary with social conditions? At the present moment Japanese firms are importing Chinese to fill the fiduciary posts. Is this because commercial trickiness is a Japanese race-character? Then why was this trait so rare under the old régime? Here is a quality of great economic importance, which varies in mysterious sympathy with social changes. What is the correlated fact in the new social era of Japan? Is it bad Western example, or an appetite for wealth whetted by new wants, or a flood-tide of new ideas, weakening the grip of the old standards and ideals that held fast the egoistic individual in a kind of moral matrix?

The honesty of Chinese bankers and merchants is well known. Yet the rottenness of government is proverbial. We read: "Mines do not pay the proprietors, because the

laborers pilfer the production; cotton factories, because the mill-hands carry off the raw material stowed away in The most important Chinese companies are their clothes. machines for the wholesale misappropriation of funds." The explanation of the paradox seems to be that for the traditional and familiar business relations the Chinese have slowly elaborated, as a sine qua non of commerce, a professional morality which rules very authoritatively those trained under it. But in novel relations and responsibilities not provided for in the professional ethics the native slipperiness of the Celestial comes to light. But this, in turn, opens up attractive lines of inquiry. How do these professional standards and ideals grow up? What gives them their binding power? Are they imposed for the good of society at large or for the good of the trade or profession? Can the larger social group impose its standards in the same way? Should abuses be cured by invoking law or by stiffening professional ethics?

Capital takes wings, and, surveying the planet from China to Peru, alights wherever there is a railroad to build or a mine to develop. But it is otherwise with labor. the economist is allowed only a single sentence on the mobility of labor, he will probably say that, like borax or bicycles, it seeks the best market, but that its cost of transportation is high. If, however, he is granted a chapter, he will find himself compelled to follow up this problem to its head-waters in another region. the Englishman migrate only to English colonies, the Frenchman to French colonies? Why are there streams of migration that can be directed or turned aside? There are not streams of wheat or lumber that can be so easily Why is it that the tide flows easily enough after the first few boat-loads of Italians have gone to Brazil or the first Norwegian settlements have been planted in Minnesota? We are told American labor and enterprise will invade the Philippines, if we keep them. Why do

they not invade them now? The economic situation will not be changed by annexation. All this suggests that there are forces that influence the groupings, co-operations, and dealings of peoples in defiance of economic considerations.

At this moment Germany is losing her Scandinavian trade through the hostility aroused by the expulsions of Danes from Schleswig-Holstein. An anti-Semitic journal in Paris has just been ruined in paying damages to tradesmen whose business it had injured by publishing them as French unfriendliness is resented by fewer American orders for articles de Paris. Here is uneconomic behavior in response to powerful sympathies and antipathies that we had assumed to be dying out. There is certainly room for a science that shall inquire how far social groupings correspond to economic interest, and how far they ignore it; that shall assign to religion, race, language, nationality, and propinguity their due share in the formation and division of groups; and that shall lay down the conditions favorable to the blending of such groups, comparing in assimilative value the Russian policy of persecution with the American policy of freedom and equality.

The tame treatment of the consumption of wealth by most economists has been due to a dim perception of many factors which are not economic. The façade type of expenditure, that lavishes on show and luxuries and scrimps on necessaries, goes with a development that removes the old landmarks and stimulates social ambitions. Fashion extends her baleful sway with the disappearance of the fixed classes of peasants, burghers, gentlefolk. The fact that all genuine, plain, homespun articles disappear before the universal demand for cheap, tawdry imitations of the furniture and clothes of the wealthy is due to the democratic constitution of society. Our buggies and parlor organs, our plated silver and veneered furniture, are as eloquent of equality as our corridor cars. The absence of distinct

ways of living for the well-to-do and the ill-to-do produces a smooth-sloping outward uniformity in costume and furniture and ornament, which, whenever possible, sacrifices reality to appearances.

The demand for food and fuel is original; but most of the wants that drive the industrial machine are inspired by example. If these imitations were haphazard, there would be nothing more to say. But are they not law-The desire for parasols, billiard-tables, and bath-rooms descends in a series of cascades from the social superior to the social inferior. And we can distinguish a society in which each class imitates the class just above it from one in which the decay of reverence permits the humblest grades to ape, as well as they can, the topmost grade, and so produces the sweeping uniformities of democracy. Nor will other inquiries prove fruitless. are wants transplanted from age to age and from folk to folk? What is the rôle of an aristocracy in the propagation of wants? What is the relation of city to country, of the smaller cities to the large ones? If the eight-hour day comes, what are the influences that will determine how the workingman shall dispose of his margin of leisure? What is the influence of education in the spread of wants?

As the time and energy of labor is directly related to the number and intensity of wants, we might expect each man's economic effort to depend immediately on his utility scale. But this is not the case. Societies themselves get a characteristic adjustment between work and wants, and this consensus overrides the individual calculus. It is natural that a younger son, like Seattle or Portland, should begin the day earlier and work harder than New Haven or Springfield. But what, save the might of usage and the contagion of example, can explain why the Western business man, even when he has made a fortune, goes on working till he drops? Moreover, the same society

changes its calculus from age to age. The England of Arthur Young was slower-pulsed than the England of to-day. And in America, since 1825, we appear to have been fevered with a gigantic, continent-conquering ambition which has made repose almost a lost art.

The economist, if challenged to differentiate economics from the science of society, might point out that his science deals with simple and well-known individual quantities and phenomena, manifesting themselves in the social theatre on a vast scale. Volumes of demand, or products, or sales, or imports, or deposits, or investments, are mere aggregates of individual acts. And, if it be objected that the socio-economic fact—the market, bank, clearing-house, or factory—differs from the individual fact underlying it, he might retort that an accident is an individual fact, but if it happens often you get an emergency hospital; that a fire is an isolated occurrence, but if there are many fires you get an engine company.

So far the economist is right. But how about cases where the social fact is not the mere footing up of the column of private facts? To-day's demand for a stock may be composed of unrelated individual preferences; but to-morrow there is a flurry, and nine-tenths of the desires to get or dispose of that stock may be due to the apparent desire of other people to get or dispose of it. A run on a bank has quite a different composition from the total withdrawals on an ordinary day. A Tacoma boom has a much more complex structure than the real estate market in Cohoes. The analysis of a Klondike rush reveals more factors and problems than the dissection of the westward drift of our population. Comparing the value of an African mining stock with the value of cattle or shirts, it will be apparent that the individual estimates underlying the former have been much more compounded and recompounded than those on which the latter is based.

In other cases we have to do with persistent currents of

imitation rather than transient waves. To the authority of tradition must we ascribe the exceptional esteem in which landed property continues to be held in England. the Jewish predilection for the occupation of trade and finance, the British willingness to take speculative risks, the Scotch regard for the "mony mickles" that "make a muckle," or the American farmer's obstinate adherence to the isolated homestead. Now the laws of cross-imitation and of up-and-down imitation are revealed only to him who studies the most various social phenomena. Tulip manias and Black Fridays and Denver booms and South Sea bubbles and Kaffir circuses must be referred to a series of phenomena ranging from mobs and revivals to political landslides. What is the nucleus of such a movement? What are the stages of its growth? How can it be stopped? What social conditions favor it? How does progress affect it? For light on these questions the economist must cross the frontier.

I have cited enough illustrations to show that the economist is sometimes led to push his inquiries over into an adjoining tract of knowledge that covers human action, and yet is not jurisprudence or ethics or political science. This adjacent science that busies itself with imitation and custom and tradition and conventionality; that seeks the origin, meaning, and authority of the standards and ideals shaping individual action; that traces the connection between the constitution of a society and the opportunities and ambitions of its members; that inquires into the causes and the consequences of the spontaneous sentimental groupings of men; and that deals with the development of the social mind and the means and extent of its ascendency over the desires and valuations of individual minds,—this science is Sociology.

The empire of the Czar is bounded on its western frontier by the clearly defined and well-explored territories of highly organized governments like Austria and Ger-

many. On its eastern side, until recently at least, it melted vaguely into the little-known lands disputed among the khanates of Central Asia. Economics likewise is bounded for the most part by regions that have been well defined and thoroughly explored by highly organized sciences. But on one side it is embarrassed by an uncertain and disputed frontier with a little-known territory, subject to the contradictory and unreasonable claims of rival chieftains. Sociology is its Central Asia.

EDWARD ALSWORTH ROSS.

THE PRECONCEPTIONS OF ECONOMIC SCIENCE.

II.

ADAM SMITH'S animistic bent asserts itself more plainly and more effectually in the general trend and aim of his discussion than in the details of theory. "Adam Smith's Wealth of Nations is, in fact, so far as it has one single purpose, a vindication of the unconscious law present in the separate actions of men when these actions are directed by a certain strong personal motive." Both in the Theory of the Moral Sentiments and in the Wealth of Nations there are many passages that testify to his abiding conviction that there is a wholesome trend in the natural course of things, and the characteristically optimistic tone in which he speaks for natural liberty is but an expression of this conviction. An extreme resort to this animistic ground occurs in his plea for freedom of investment.

In the proposition that men are "led by an invisible hand," Smith does not fall back on a meddling Providence who is to set human affairs straight when they are in danger of going askew. He conceives the Creator to be very continent in the matter of interference with the natural course of things. The Creator has established

^{*}Bonar, Philosophy and Political Economy, pp. 177, 178.

^{†&}quot;Every individual is continually exerting himself to find out the most advantageous employment for whatever capital he can command. It is his own advantage, and not that of the society, which he has in view. But the study of his own advantage naturally, or rather necessarily, leads him to prefer that employment which is most advantageous to the society.... By directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain; and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it." Wealth of Nations, Book IV. chap. ii.

the natural order to serve the ends of human welfare; and he has very nicely adjusted the efficient causes comprised in the natural order, including human aims and motives, to this work that they are to accomplish. The guidance of the invisible hand takes place not by way of interposition, but through a comprehensive scheme of contrivances established from the beginning. For the purpose of economic theory, man is conceived to be consistently self-seeking; but this economic man is a part of the mechanism of nature, and his self-seeking traffic is but a means whereby, in the natural course of things, the general welfare is worked out. The scheme as a whole is guided by the end to be reached, but the sequence of events through which the end is reached is a causal sequence which is not broken into episodically. The benevolent work of guidance was performed in first establishing an ingenious mechanism of forces and motives capable of accomplishing an ordained result, and nothing beyond the enduring constraint of an established trend remains to enforce the divine purpose in the resulting natural course of things.

The sequence of events, including human motives and human conduct, is a causal sequence; but it is also something more, or, rather, there is also another element of continuity besides that of brute cause and effect, present even in the step-by-step process whereby the natural course of things reaches its final term. The presence of such a quasi-spiritual or non-causal element is evident from two (alleged) facts. (1) The course of things may be deflected from the direct line of approach to that consummate human welfare which is its legitimate end. The natural trend of things may be overborne by an untoward conjuncture of causes. There is a distinction, often distressingly actual and persistent, between the legitimate and the observed course of things. If "natural," in Adam Smith's use, meant necessary, in the sense

of causally determined, no divergence of events from the natural or legitimate course of things would be possible. If the mechanism of nature, including man, were a mechanically competent contrivance for achieving the great artificer's design, there could be no such episodes of blundering and perverse departure from the direct path as Adam Smith finds in nearly all existing arrangements. Institutional facts would then be "natural." * (2) When things have gone wrong, they will right themselves if interference with the natural course ceases: whereas, in the case of a causal sequence simply, the mere cessation of interference will not leave the outcome the same as if no interference had taken place. This recuperative power of nature is of an extra-mechanical character. The continuity of sequence by force of which the natural course of things prevails is, therefore, not of the nature of cause and effect, since it bridges intervals and interruptions in the causal sequence.† Adam Smith's use of the term "real" in statements of theory - as, for example, "real value," "real price" 1 - is evidence to this effect. "Natural" commonly has the same meaning as "real" in this connection. § Both "natural" and "real" are placed in contrast with the actual; and, in Adam Smith's apprehension, both have a substantiality

^{*}The discrepancy between the actual, causally determined situation and the divinely intended consummation is the metaphysical ground of all that inculcation of morality and enlightened policy that makes up so large a part of Adam Smith's work. The like, of course, holds true for all moralists and reformers who proceed on the assumption of a providential order.

^{† &}quot;In the political body, however, the wisdom of nature has fortunately made ample provision for remedying many of the bad effects of the folly and injustice of man; in the same manner as it has done in the natural body, for remedying those of his sloth and intemperance." Wealth of Nations, Book IV. chap, ix,

 $[\]ddagger E.g.$, "the real measure of the exchangeable value of all commodities." Wealth of Nations, Book I. chap. v., and repeatedly in the like connection.

[§] E.g., Book I. chap. vii.: "When the price of any commodity is neither more nor less than what is sufficient to pay the rent of the land, the wages of the labor, and the profits of the stock employed in raising, preparing, and

different from and superior to facts. The view involves a distinction between reality and fact, which survives in a weakened form in the theories of "normal" prices, wages, profits, costs, in Adam Smith's successors.

This animistic prepossession seems to pervade the earlier of his two monumental works in a greater degree than the latter. In the Moral Sentiments recourse is had to the teleological ground of the natural order more freely and with perceptibly greater insistence. seems to be reason for holding that the animistic preconception weakened or, at any rate, fell more into the background as his later work of speculation and investigation proceeded. The change shows itself also in some details of his economic theory, as first set forth in the Lectures, and afterwards more fully developed in the Wealth of Nations. So, for instance, in the earlier presentation of the matter, "the division of labor is the immediate cause of opulence"; and this division of labor, which is the chief condition of economic well-being, "flows from a direct propensity in human nature for one man to barter with another."* The "propensity" in question is here appealed to as a natural endowment immediately given to man with a view to the welfare of human society, and without any attempt at further explanation of how man has come by it. No causal explanation of its presence or character is offered. But the corresponding passage of the Wealth of Nations handles the question more cautiously.† Other parallel passages might be compared with much the same effect. The

bringing it to market, according to their natural rates, the commodity is then sold for what may be called its natural price." "The actual price at which any commodity is commonly sold is called its market price. It may be either above or below or exactly the same with its natural price."

^{*} Lectures of Adam Smith (Ed. Cannan, 1896), p. 169.

^{†&}quot;This division of labor, from which so many advantages are derived, is not originally the effect of any human wisdom, which foresees and intends that general opulence to which it gives occasion. It is the necessary though

guiding hand has withdrawn farther from the range of human vision.

However, these and other like filial expressions of a devout optimism need, perhaps, not be taken as integral features of Adam Smith's economic theory, or as seriously affecting the character of his work as an economist. They are the expression of his general philosophical and theological views, and are significant for the present purpose chiefly as evidences of an animistic and optimistic bent. They go to show what is Adam Smith's accepted ground of finality,—the ground to which all his speculations on human affairs converge; but they do not in any great degree show the teleological bias guiding the formulation of economic theory in detail.

The effective working of the teleological bias is best seen in Smith's more detailed handling of economic phenomena - in his discussion of what may loosely be called economic institutions - and in the criteria and principles of procedure by which he is guided in incorporating these features of economic life into the general structure of his theory. A fair instance, though perhaps not the most telling one, is the discussion of the "real and nominal price," and of the "natural and market price" of commodities, already referred to above.* The "real" price of commodities is their value in terms of human life. At this point Smith differs from the Physiocrats, with whom the ultimate terms of value are afforded by human sustenance taken as a product of the functioning of brute nature: the cause of the difference being that the Physiocrats conceived the natural order which works towards

very alow and gradual consequence of a certain propensity in human nature which has in view no such extensive utility,—the propensity to truck, barter, and exchange one thing for another. Whether this propensity be one of those original principles in human nature of which no further account can be given, or whether, as seems more probable, it be the necessary consequence of the faculties of reason and speech, it belongs not to our present subject to inquire." Wealth of Nations, Book I. chap. ii.

^{*} Wealth of Nations, Book I. chaps. v.-vii.

the material well-being of man to comprise the non-human environment only, whereas Adam Smith includes man in this concept of the natural order, and, indeed, makes him the central figure in the process of production. With the Physiocrats, production is the work of nature: with Adam Smith, it is the work of man and nature, with man in the foreground. In Adam Smith, therefore, labor is the final term in valuation. This "real" value of commodities is the value imputed to them by the economist under the stress of his teleological preconception. It has little, if any, place in the course of economic events, and no bearing on human affairs, apart from the sentimental influence which such a preconception in favor of a "real value" in things may exert upon men's notions of what is the good and equitable course to pursue in their transactions. is impossible to gauge this real value of goods; it cannot be measured or expressed in concrete terms. Still, if labor exchanges for a varying quantity of goods, "it is their value which varies, not that of the labor which purchases them."* The values which practically attach to goods in men's handling of them are conceived to be determined without regard to the real value which Adam Smith imputes to the goods; but, for all that, the substantial fact with respect to these market values is their presumed approximation to the real values teleologically imputed to the goods under the guidance of inviolate natural laws. The real, or natural, value of articles has no causal relation to the value at which they exchange. The discussion of how values are determined in practice runs on the motives of the buyers and sellers, and the relative advantage enjoyed by the parties to the transaction.† It is a discussion of a process of valuation, quite unrelated to the "real," or "natural," price of things, and

^{*} Wealth of Nations, Book I. chap. v.

[†] As, e.g., the entire discussion of the determination of Wages, Profits, and Rent, in Book I. chaps. viii.-xi.

quite unrelated to the grounds on which things are held to come by their real, or natural, price; and yet, when the complex process of valuation has been traced out in terms of human motives and the exigencies of the market, Adam Smith feels that he has only cleared the ground. He then turns to the serious business of accounting for value and price theoretically, and making the ascertained facts articulate with his teleological theory of economic life.*

The occurrence of the words "ordinary" and "average" in this connection need not be taken too seriously. The context makes it plain that the equality which commonly subsists between the ordinary or average rates, and the natural rates, is a matter of coincidence, not of identity. Not only are there temporary deviations, but there may be a permanent divergence between the ordinary and the natural price of a commodity; as in case of a monopoly or of produce grown under peculiar circumstances of soil or climate.†

The natural price coincides with the price fixed by competition, because competition means the unimpeded play of those efficient forces through which the nicely adjusted mechanism of nature works out the design to accomplish which it was contrived. The natural price is reached through the free interplay of the factors of

* There is in every society or neighborhood an ordinary or average rate both of wages and profit in every different employment of labor and stock. This rate is naturally regulated, . . . partly by the general circumstances of the society. . . . There is, likewise, in every society or neighborhood an ordinary or average rate of rent, which is regulated, too. . . . These ordinary or average rates may be called the natural rates of wages, profit, and rent, at the time and place in which they commonly prevail. When the price of any commodity is neither more nor less than what is sufficient to pay the rent of the land, the wages of the labor, and the profits of the stock employed in raising, preparing, and bringing it to market, according to their natural rates, the commodity is then sold for what may be called its natural price." Wealth of Nations, Book I. chap. vii.

† "Such commodities may continue for whole centuries together to be sold at this high price; and that part of it which resolves itself into the rent of land is, in this case, the part which is generally paid above its natural rate." Book I. chap. vii.

production, and it is itself an outcome of production. Nature, including the human factor, works to turn out the goods; and the natural value of the goods is their appraisement from the standpoint of this productive process of nature. Natural value is a category of production: whereas, notoriously, exchange value or market price is a category of distribution. And Adam Smith's theoretical handling of market price aims to show how the factors of human predilection and human wants at work in the higgling of the market bring about a result in passable consonance with the natural laws that are conceived to govern production.

The natural price is a composite result of the blending of the three "component parts of the price of commodities,"—the natural wages of laborer, the natural profits of stock, and the natural rent of land; and each of these three components is in its turn the measure of the productive effect of the factor to which it pertains. further discussion of these shares in distribution aims to account for the facts of distribution on the ground of the productivity of the factors which are held to share the product between them. That is to say, Adam Smith's preconception of a productive natural process as the basis of his economic theory dominates his aims and procedure. when he comes to deal with phenomena that cannot be stated in terms of production. The causal sequence in the process of distribution is, by Adam Smith's own showing, unrelated to the causal sequence in the process of production; but, since the latter is the substantial fact. as viewed from the standpoint of a teleological natural order, the former must be stated in terms of the latter before Adam Smith's sense of substantiality, or "reality." is satisfied. Something of the same kind is, of course, visible in the Physiocrats and in Cantillon. It amounts to an extension of the natural-rights preconception to economic theory. Adam Smith's discussion of distribution as a function of productivity might be traced in detail through his handling of Wages, Profits, and Rent; but, since the aim here is a brief characterization only, and not an exposition, no farther pursuit of this point seems feasible.

It may, however, be worth while to point out another line of influence along which the dominance of the teleological preconception shows itself in Adam Smith. This is the normalization of data, in order to bring them into consonance with an orderly course of approach to the putative natural end of economic life and development. The result of this normalization of data is, on the one hand, the use of what James Steuart calls "conjectural history" in dealing with past phases of economic life, and, on the other hand, a statement of present-day phenomena in terms of what legitimately ought to be according to the God-given end of life rather than in terms of unconstrued observation. Account is taken of the facts (supposed or observed) ostensibly in terms of causal sequence, but the imputed causal sequence is construed to run on lines of teleological legitimacy.

A familiar instance of this "conjectural history," in a highly and effectively normalized form, is the account of "that early and rude state of society which precedes both the accumulation of stock and the appropriation of land." It is needless at this day to point out that this "early and rude state," in which "the whole produce of labor belongs to the laborer," is altogether a figment. The whole narrative, from the putative origin down, is not only supposititious, but it is merely a schematic presentation of what should have been the course of past development, in order to lead up to that ideal economic situation which would satisfy Adam Smith's preconception.† As the narrative comes nearer the region of

^{*} Wealth of Nations, Book I. chap. vi.; also chap. viii.

[†]For an instance of how these early phases of industrial development appear, when not seen in the light of Adam Smith's preconception, see, among others, Bücher, Entstehung der Volkswirtschaft.

known latter-day facts, the normalization of the data becomes more difficult and receives more detailed attention; but the change in method is a change of degree rather than of kind. In the "early and rude state" the coincidence of the "natural" and the actual course of events is immediate and undisturbed, there being no refractory data at hand; but in the later stages and in the present situation, where refractory facts abound, the co-ordination is difficult, and the coincidence can be shown only by a free abstraction from phenomena that are irrelevant to the teleological trend and by a laborious interpretation of the rest. The facts of modern life are intricate, and lend themselves to statement in the terms of the theory only after they have been subjected to a "higher criticism."

The chapter "Of the Origin and Use of Money" * is an elegantly normalized account of the origin and nature of an economic institution, and Adam Smith's further discussion of money runs on the same lines. The origin of money is stated in terms of the purpose which money should legitimately serve in such a community as Adam Smith considered right and good, not in terms of the motives and exigencies which have resulted in the use of money and in the gradual rise of the existing method of payment and accounts. Money is "the great wheel of circulation," which effects the transfer of goods in process of production and the distribution of the finished goods to the consumers. It is an organ of the economic commonwealth rather than an expedient of accounting and a conventional repository of wealth.

It is perhaps superfluous to remark that to the "plain man," who is not concerned with the "natural course of things" in a consummate Geldwirtschaft, the money that passes his hand is not a "great wheel of circulation." To the Samoyed, for instance, the reindeer which serves him

*Book I. chap. iv.

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as unit of value is wealth in the most concrete and tangible form. Much the same is true of coin, or even of bank-notes, in the apprehension of unsophisticated people among ourselves to-day. And yet it is in terms of the habits and conditions of life of these "plain people" that the development of money will have to be accounted for if it is to be stated in terms of cause and effect.

The few scattered passages already cited may serve to illustrate how Adam Smith's animistic or teleological bent shapes the general structure of his theory and gives it consistency. The principle of definitive formulation in Adam Smith's economic knowledge is afforded by a putative purpose that does not at any point enter causally into the economic life process which he seeks to know. This formative or normative purpose or end is not freely conceived to enter as an efficient agent in the events discussed, or to be in any way consciously present in the process. It can scarcely be taken as an animistic agency engaged in the process. It sanctions the course of things, and gives legitimacy and substance to the sequence of events, so far as this sequence may be made to square with the requirements of the imputed end. It has therefore a ceremonial or symbolical force only, and lends the discussion a ceremonial competency; although with economists who have been in passable agreement with Adam Smith as regards the legitimate end of economic life this ceremonial consistency, or consistency de jure, has for many purposes been accepted as the formulation of a causal continuity in the phenomena that have been interpreted in its terms. Elucidations of what normally ought to happen, as a matter of ceremonial necessity, have in this way come to pass for an account of matters of fact.

But, as has already been pointed out, there is much more to Adam Smith's exposition of theory than a formulation of what ought to be. Much of the advance he achieved over his predecessors consists in a larger and more painstaking scrutiny of facts, and a more consistent tracing out of causal continuity in the facts handled. doubt, his superiority over the Physiocrats, that characteristic of his work by virtue of which it superseded theirs in the farther growth of economic science, lies to some extent in his recourse to a different, more modern ground of normality,—a ground more in consonance with the body of preconceptions that have had the vogue in later gener-It is a shifting of the point of view from which the facts are handled; but it comes in great part to a substitution of a new body of preconceptions for the old, or a new adaptation of the old ground of finality, rather than an elimination of all metaphysical or animistic norms of valuation. With Adam Smith, as with the Physiocrats, the fundamental question, the answer to which affords the point of departure and the norm of procedure, is a question of substantiality or economic "reality." With both, the answer to this question is given naively, as a deliverance of common sense. Neither is disturbed by doubts as to this deliverance of common sense or by any need of scrutinizing it. To the Physiocrats this substantial ground of economic reality is the nutritive process of Nature. To Adam Smith it is Labor. reality has the advantage of being the deliverance of the common sense of a more modern community, and one that has maintained itself in force more widely and in better consonance with the facts of latter-day industry. The Physiocrats owe their preconception of the productiveness of nature to the habits of thought of a community in whose economic life the dominant phenomenon was the owner of agricultural land. Adam Smith owes his preconception in favor of labor to a community in which the obtrusive economic feature of the immediate past was handicraft and agriculture, with commerce as a scarcely secondary phenomenon.

So far as Adam Smith's economic theories are a tracing out of the causal sequence in economic phenomena, they are worked out in terms given by these two main directions of activity, - human effort directed to the shaping of the material means of life, and human effort and discretion directed to a pecuniary gain. The former is the great, substantial productive force: the latter is not immediately, or proximately, productive.* Adam Smith still has too lively a sense of the nutritive purpose of the order of nature freely to extend the concept of productiveness to any activity that does not yield a material increase of the creature comforts. His instinctive appreciation of the substantial virtue of whatever effectually furthers nutrition, even leads him into the concession that "in agriculture nature labors along with man," although the general tenor of his argument is that the productive force with which the economist always has to count is human labor. This recognized substantiality of labor as productive is, as has already been remarked, accountable for his effort to reduce to terms of productive labor such a category of distribution as exchange value.

With but slight qualification, it will hold that, in the causal sequence which Adam Smith traces out in his economic theories proper (contained in the first three books of the Wealth of Nations), the causally efficient factor is conceived to be human nature in these two relations,—of productive efficiency and pecuniary gain through exchange. Pecuniary gain—gain in the material means of life through barter—furnishes the motive force to the economic activity of the individual; although productive efficiency is the legitimate, normal end of the community's economic life. To such an extent does this concept of man's seeking his ends through "truck, barter, and exchange" pervade Adam Smith's treatment of eco-

^{*}See Wealth of Nations, Book II. chap. v., "Of the Different Employment of Capitals."

nomic processes that he even states production in its terms, and says that "labor was the first price, the original purchase-money, that was paid for all things."* The human nature engaged in this pecuniary traffic is conceived in somewhat hedonistic terms, and the motives and movements of men are normalized to fit the requirements of a hedonistically conceived order of nature. Men are very much alike in their native aptitudes and propensities; † and, so far as economic theory need take account of these aptitudes and propensities, they are aptitudes for the production of the "necessaries and conveniences of life," and propensities to secure as great a share of these creature comforts as may be.

Adam Smith's conception of normal human nature that is to say, the human factor which enters causally in the process which economic theory discusses - comes, on the whole, to this: Men exert their force and skill in a mechanical process of production, and their pecuniary sagacity in a competitive process of distribution, with a view to individual gain in the material means of life. These material means are sought in order to the satisfaction of men's natural wants through their consumption. It is true, much else enters into men's endeavors in the struggle for wealth, as Adam Smith points out; but this consumption comprises the legitimate range of incentives, and a theory which concerns itself with the natural course of things need take but incidental account of what does not come legitimately in the natural course. In point of fact, there are appreciable "actual," though scarcely "real," departures from this rule. They are spurious and insubstantial departures, and do not properly come

[•] Wealth of Nations, Book I. chap. v. See also the plea for free trade, Book IV. chap. ii.: "But the annual revenue of every society is always precisely equal to the exchangeable value of the whole annual produce of its industry, or, rather, is precisely the same thing with that exchangeable value."

^{† &}quot;The difference of natural talents in different men is in reality much lest than we are aware of." Wealth of Nations, Book I. chap. ii.

within the purview of the stricter theory. And, since human nature is strikingly uniform, in Adam Smith's apprehension, both the efforts put forth and the consumptive effect accomplished may be put in quantitative terms and treated algebraically, with the result that the entire range of phenomena comprised under the head of consumption need be but incidentally considered; and the theory of production and distribution is complete when the goods or the values have been traced to their disappearance in the hands of their ultimate owners. The reflex effect of consumption upon production and distribution is, on the whole, quantitative only.

Adam Smith's preconception of a normal teleological order of procedure in the natural course, therefore, affects not only those features of theory where he is avowedly concerned with building up a normal scheme of the economic process. Through his normalizing the chief causal factor engaged in the process, it affects also his arguments from cause to effect.* What makes this latter feature worth particular attention is the fact that his successors carried this normalization farther, and employed it with less frequent reference to the mitigating exceptions which Adam Smith notices by the way.

The reason for that farther and more consistent normalization of human nature which gives us the "economic man" at the hands of Adam Smith's successors lies, in great part, in the utilitarian philosophy that entered in force and in consummate form at about the turning of the century. Some credit in the work of normalization is due

*" Mit diesen philosophischen Ueberzeugungen tritt nun Adam Smith an die Welt der Enfahrung heran, und es ergiebt sich ihm die Richtigkeit der Principien. Der Reiz der Smith'schen Schriften beruht zum grossen Teile darauf, dass Smith die Principien in so innige Verbindung mit dem Thatsächlichen gebracht. Hie und da werden dann auch die Principien, was durch diese Verbindung veranlasst wird, an ihren Spitzen etwas abgeschliffen, ihre allzuscharfe Ausprägung dadurch vermieden. Nichtsdestoweniger aber bleiben sie stets die leitenden Grundgedanken." Richard Zeyss, Adam Smith und der Eigennutz (Tübingen, 1889), p. 110.

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also to the farther supersession of handicraft by the "capitalistic" industry that came in at the same time and in pretty close relation with the utilitarian views.

After Adam Smith's day, economics fell into profane hands. Apart from Malthus, who, of all the greater economists, stands nearest to Adam Smith on such metaphysical heads as have an immediate bearing upon the premises of economic science, the next generation do not approach their subject from the point of view of a divinely instituted order; nor do they discuss human interests with that gently optimistic spirit of submission that belongs to the economist who goes to his work with the fear of God before his eyes. Even with Malthus the recourse to the divinely sanctioned order of nature is somewhat sparing and temperate. But it is significant for the later course of economic theory that, while Malthus may well be accounted the truest continuer of Adam Smith, it was the undevout utilitarians that became the spokesmen of the science after Adam Smith's time.

There is no wide breach between Adam Smith and the utilitarians, either in details of doctrine or in the concrete conclusions arrived at as regards questions of policy. On these heads Adam Smith might well be classed as a moderate utilitarian, particularly so far as regards his economic work. Malthus has still more of a utilitarian air,—so much so, indeed, that he is not infrequently spoken of as a utilitarian. This view, convincingly set forth by Mr. Bonar,* is no doubt well borne out by a detailed scrutiny of Malthus's economic doctrines. His humanitarian bias is evident throughout, and his weakness for considerations of expediency is the great blemish of his scientific work. But, for all that, in order to an appreciation of the change that came over classical economics with the

^{*}See, e.g., Malthus and his Work, especially Book III., as also the chapter on Malthus in Philosophy and Political Economy, Book III., Modern Philosophy: Utilitarian Economics, chap. i., "Malthus."

rise of Benthamism, it is necessary to note that the agreement in this matter between Adam Smith and the disciples of Bentham, and less decidedly that between Malthus and the latter, is a coincidence of conclusions rather than an identity of preconceptions.*

With Adam Smith the ultimate ground of economic reality is the design of God, the teleological order; and his utilitarian generalizations, as well as the hedonistic character of his economic man, are but methods of the working out of this natural order, not the substantial and self-legitimating ground. Shifty as Malthus's metaphysics are, much the same is to be said for him.† Of the utilitarians proper the converse is true, although here, again, there is by no means utter consistency. The substantial economic ground is pleasure and pain: the teleological order (even the design of God, where that is admitted) is the method of its working out.

It may be unnecessary here to go into the farther implications, psychological and ethical, which this preconception of the utilitarians involves. And even this much may seem a taking of excessive pains with a distinction that marks no tangible difference. But a reading of the classical doctrines, with something of this metaphysics of political economy in mind, will show how, and in great part why, the later economists of the classical line diverged from Adam Smith's tenets in the early years of the century, until it has been necessary to interpret Adam Smith somewhat shrewdly in order to save him from heresy.

The post-Bentham economics is substantially a theory of value. This is altogether the dominant feature of the

^{*}Ricardo is here taken as a utilitarian of the Benthamite color, although he cannot be classed as a disciple of Bentham. His hedonism is but the uncritically accepted metaphysics comprised in the common sense of his time, and his substantial coincidence with Bentham goes to show how well diffused the hedonist preconception was at the time.

[†] Cf. Bonar, Malthus and his Work, pp. 323-336.

body of doctrines; the rest follows from, or is adapted to, this central discipline. The doctrine of value is of very great importance also in Adam Smith; but Adam Smith's economics is a theory of the production and apportionment of the material means of life.* With Adam Smith, value is discussed from the point of view of production. With the utilitarians, production is discussed from the point of view of value. The former makes value an outcome of the process of production: the latter makes production the outcome of a valuation process.

The point of departure with Adam Smith is the "productive power of labor." † With Ricardo it is a pecuniary problem concerned in the distribution of ownership; ‡ but the classical writers are followers of Adam Smith, and improve upon and correct the results arrived at by him, and the difference of point of view, therefore, becomes evident in their divergence from him, and the different distribution of emphasis, rather than in a new and antagonistic departure.

The reason for this shifting of the centre of gravity from production to valuation lies, proximately, in Bentham's revision of the "principles" of morals. Bentham's philosophical position is, of course, not a self-explanatory phenomenon, nor does the effect of Benthamism extend only to those who are avowed followers of Bentham; for Bentham is the exponent of a cultural change that affects the habits of thought of the entire community.

^{*}His work is an inquiry into "the Nature and Causes of the Wealth of Nations."

^{†&}quot;The annual labor of every nation is the fund which originally supplies it with all the necessaries and conveniences of life which it annually consumes, and which consist always either in the immediate produce of that labor or in what is purchased with that produce from other nations." Wealth of Nations, "Introduction and Plan," opening paragraph.

t"The produce of the earth—all that is derived from its surface by the united application of labor, machinery, and capital—is divided among three classes of the community. . . . To determine the laws which regulate this distribution, is the principal problem of political economy." Political Economy, Preface.

The immediate point of Bentham's work, as affecting the habits of thought of the educated community, is the substitution of hedonism (utility) in place of achievement of purpose, as a ground of legitimacy and a guide in the normalization of knowledge. Its effect is most patent in speculations on morals, where it inculcates determinism. Its close connection with determinism in ethics points the way to what may be expected of its working in economics. In both cases the result is that human action is construed in terms of the causal forces of the environment, the human agent being, at the best, taken as a mechanism of commutation, through the workings of which the sensuous effects wrought by the impinging forces of the environment are, by an enforced process of valuation, transmuted without quantitative discrepancy into moral or economic conduct, as the case may be. In ethics and economics alike the subject-matter of the theory is this valuation process that expresses itself in conduct, resulting, in the case of economic conduct, in the pursuit of the greatest gain or least sacrifice.

Metaphysically or cosmologically considered, the human nature into the motions of which hedonistic ethics and economics inquire is an intermediate term in a causal sequence, of which the initial and the terminal members are sensuous impressions and the details of conduct. This intermediate term conveys the sensuous impulse without loss of force to its eventuation in conduct. the purpose of the valuation process through which the impulse is so conveyed, human nature may, therefore, be accepted as uniform; and the theory of the valuation process may be formulated quantitatively, in terms of the material forces affecting the human sensory and of their equivalents in the resulting activity. In the language of economics, the theory of value may be stated in terms of the consumable goods that afford the incentive to effort and the expenditure undergone in order to procure them.

Between these two there subsists a necessary equality; but the magnitudes between which the equality subsists are hedonistic magnitudes, not magnitudes of kinetic energy nor of vital force, for the terms handled are sensuous terms. It is true, since human nature is substantially uniform, passive, and unalterable in respect of men's capacity for sensuous affection, there may also be presumed to subsist a substantial equality between the psychological effect to be wrought by the consumption of goods, on the one side, and the resulting expenditure of kinetic or vital force, on the other side; but such an equality is. after all, of the nature of a coincidence, although there should be a strong presumption in favor of its prevailing on an average and in the common run of cases. Hedonism, however, does not postulate uniformity between men except in the respect of sensuous cause and effect.

The theory of value which hedonism gives is, therefore, a theory of cost in terms of discomfort. By virtue of the hedonistic equilibrium reached through the valuation process, the sacrifice or expenditure of sensuous reality involved in acquisition is the equivalent of the sensuous gain secured. An alternative statement might perhaps be made, to the effect that the measure of the value of goods is not the sacrifice or discomfort undergone, but the sensuous gain that accrues from the acquisition of the goods; but this is plainly only an alternative statement, and there are special reasons in the economic life of the time why the statement in terms of cost, rather than in terms of "utility," should commend itself to the earlier classical economists.

On comparing the utilitarian doctrine of value with earlier theories, then, the case stands somewhat as follows. The Physiocrats and Adam Smith contemplate value as a measure of the productive force that realizes itself in the valuable article. With the Physiocrats this productive force is the "anabolism" of Nature (to resort to

a physiological term): with Adam Smith it is chiefly human labor directed to heightening the serviceability of the materials with which it is occupied. Production causes value in either case. The post-Bentham economics contemplates value as a measure of, or as measured by. the irksomeness of the effort involved in procuring the valuable goods. As Mr. E. C. K. Gonner has admirably pointed out,* Ricardo — and the like holds true of classical economics generally - makes cost the foundation of value, not its cause. This resting of value on cost takes place through a valuation. Any one who will read Adam Smith's theoretical exposition to as good purpose as Mr. Gonner has read Ricardo will scarcely fail to find that the converse is true in Adam Smith's case. causal relation of cost to value holds only as regards "natural" or "real" value in Adam Smith's doctrine. As regards market price, Adam Smith's theory does not differ greatly from that of Ricardo on this head. He does not overlook the valuation process by which market price is adjusted and the course of investment is guided, and his discussion of this process runs in terms that should be acceptable to any hedonist.

The shifting of the point of view that comes into economics with the acceptance of utilitarian ethics and its correlate, the associationist psychology, is in great part a shifting to the ground of causal sequence as contrasted with that of serviceability to a preconceived end. This is indicated even by the main fact already cited,—that the utilitarian economists make exchange value the central feature of their theories, rather than the conduciveness of industry to the community's material welfare. Hedonistic exchange value is the outcome of a valuation process enforced by the apprehended pleasure-giving capacities of the items valued. And in the utilitarian

^{*}In the introductory essay to his edition of Ricardo's Political Economy. See, e.g., paragraphs 9 and 24.

theories of production, arrived at from the standpoint so given by exchange value, the conduciveness to welfare is not the objective point of the argument. This objective point is rather the bearing of productive enterprise upon the individual fortunes of the agents engaged, or upon the fortunes of the several distinguishable classes of beneficiaries comprised in the industrial community: for the great immediate bearing of exchange values upon the life of the collectivity is their bearing upon the distribution of wealth. Value is a category of distribution. result is that, as is well shown by Mr. Cannan's discussion,* the theories of production offered by the classical economists have been sensibly scant, and have been carried out with a constant view to the doctrines on distribution. An incidental but telling demonstration of the same facts is given by Professor Bücher; † and in illustration may be cited Torrens's Essay on the Production of Wealth, which is to a good extent occupied with discussions of value and distribution. The classical theories of production have been theories of the production of "wealth"; and "wealth," in classical usage, consists of material things having exchange value. During the vogue of the classical economics the accepted characteristic by which "wealth" has been defined has been its amenability to ownership. Neither in Adam Smith nor in the Physiocrats is this amenability to ownership made so much of, nor is it in a similar degree accepted as a definite mark of the subject-matter of the science.

As their hedonistic preconception would require, then, it is to the pecuniary side of life that the classical economists give their most serious attention, and it is the pecuniary bearing of any given phenomenon or of any institution that commonly shapes the issue of the argu-

^{*} Theories of Production and Distribution, 1776-1848.

[†] Entstehung der Volkswirtschaft (second edition). Cf. especially chaps. ii., iii., vi., and vii.

ment. The causal sequence about which the discussion centres is a process of pecuniary valuation. It runs on distribution, ownership, acquisition, gain, investment, exchange.* In this way the doctrines on production come to take a pecuniary coloring; as is seen in a less degree also in Adam Smith, and even in the Physiocrats. although these earlier economists very rarely, if ever, lose touch with the concept of generic serviceability as the characteristic feature of production. The tradition derived from Adam Smith, which made productivity and serviceability the substantial features of economic life, was not abruptly put aside by his successors, though the emphasis was differently distributed by them in following out the line of investigation to which the tradition pointed the way. In the classical economics the ideas of production and of acquisition are not commonly held apart, and very much of what passes for a theory of production is occupied with phenomena of investment and acquisition. Torrens's Essay is a case in point, though by no means an extreme case.

This is as it should be; for to the consistent hedonist the sole motive force concerned in the industrial process is the self-regarding motive of pecuniary gain, and industrial activity is but an intermediate term between the expenditure or discomfort undergone and the pecuniary gain sought. Whether the end and outcome is an invidious gain for the individual (in contrast with or at the cost of his neighbors), or an enhancement of the facility of human life on the whole, is altogether a by-question in any discussion of the range of incentives by which men are prompted to their work or the direction which their efforts take. The serviceability of the given line of activ-

[&]quot;"Even if we put aside all questions which involve a consideration of the effects of industrial institutions in modifying the habits and character of the classes of the community, . . . that enough still remains to constitute a separate science, the mere enumeration of the chief terms of economics—wealth, value, exchange, credit money, capital, and commodity—will suffice to show." Shirres, Analysis of the Ideas of Economics (London, 1893), pp. 8 and 9.

ity, for the life purposes of the community or for one's neighbors, "is not of the essence of this contract." These features of serviceability come into the account chiefly as affecting the vendibility of what the given individual has to offer in seeking gain through a bargain.*

In hedonistic theory the substantial end of economic life is individual gain; and for this purpose production and acquisition may be taken as fairly coincident, if not identical. Moreover, society, in the utilitarian philosophy, is the algebraic sum of the individuals; and the interest of the society is the sum of the interests of the individuals. It follows by easy consequence, whether strictly true or not, that the sum of individual gains is the gain of the society, and that, in serving his own interest in the way of acquisition, the individual serves the collective interest of the community. Productivity or serviceability is, therefore, to be presumed of any occupation or enterprise that looks to a pecuniary gain; and so, by a roundabout path, we get back to the ancient conclusion of Adam Smith, that the remuneration of classes or persons engaged in industry coincides with their productive contribution to the output of services and consumable goods.

A felicitous illustration of the working of this hedonistic norm in classical economic doctrine is afforded by the theory of the wages of superintendence,—an element in distribution which is not much more than suggested in Adam Smith, but which receives ampler and more painstaking attention as the classical body of doctrines reaches a fuller development. The "wages of superintendence" are the gains due to pecuniary management. They are the gains that come to the director of the "business,"—not those that go to the director of the mechanical proc-

^{*} If a commodity were in no way useful, . . . it would be destitute of exchangeable value; . . . (but), possessing utility, commodities derive their exchangeable value from two sources," etc. Ricardo, *Political Economy*, chap. i, sect. 1.

ess or to the foreman of the shop. The latter are wages simply. This distinction is not altogether clear in the earlier writers, but it is clearly enough contained in the fuller development of the theory.

The undertaker's work is the management of investment. It is altogether of a pecuniary character, and its proximate aim is "the main chance." If it leads, indirectly, to an enhancement of serviceability or a heightened aggregate output of consumable goods, that is a fortuitous circumstance incident to that heightened vendibility on which the investor's gain depends. Yet the classical doctrine says frankly that the wages of superintendence are the remuneration of superior productivity, and the classical theory of production is in good part a doctrine of investment in which the identity of production and pecuniary gain is taken for granted.

The substitution of investment in the place of industry as the central and substantial fact in the process of production is due not to the acceptance of hedonism simply, but rather to the conjunction of hedonism with an economic situation of which the investment of capital and its management for gain was the most obvious feature. The situation which shaped the common-sense apprehension of economic facts at the time was what has since been called a capitalistic system, in which pecuniary enterprise and the phenomena of the market were the dominant and tone-giving facts. But this economic situation was also the chief ground for the vogue of hedonism in economics; so that hedonistic economics may be taken as an interpretation of human nature in terms of the market-place. The market and the "business world," to which the busi-

^{*}Cf., for instance, Senior, Political Economy (London, 1872), particularly pp. 88, 89, and 130-135, where the wages of superintendence are, somewhat reluctantly, classed under profits; and the work of superintendence is thereupon conceived as being, immediately or remotely, an exercise of "abstinence" and a productive work. The illustration of the bill-broker is particularly apt. The like view of the wages of superintendence is an article of theory with more than one of the later descendants of the classical line.

ness man in his pursuit of gain was required to adapt his motives, had by this time grown so large that the course of business events was beyond the control of any one person; and at the same time those far-reaching organizations of invested wealth which have latterly come to prevail and to coerce the market were not then in the foreground. The course of market events took its passionless way without traceable relation or deference to any man's convenience and without traceable guidance towards an ulterior end. Man's part in this pecuniary world was to respond with alacrity to the situation, and so adapt his vendible effects to the shifting demand as to realize something in the outcome. What he gained in his traffic was gained without loss to those with whom he dealt, for they paid no more than the goods were worth to them. One man's gain need not be another's loss; and, if it is not, then it is net gain to the community.

Among the striking remoter effects of the hedonistic preconception, and its working out in terms of pecuniary gain, is the classical failure to discriminate between capital as investment and capital as industrial appliances. This is, of course, closely related to the point already spoken of. The appliances of industry further the production of goods, therefore capital (invested wealth) is productive; and the rate of its average remuneration marks the degree of its productiveness.* The most obvious fact limiting the pecuniary gain secured by means of invested wealth is the sum invested. Therefore, capital limits the productiveness of industry; and the chief and indispensable condition to an advance in material well-being is the accumulation of invested wealth. In discussing the conditions of industrial improvement, it is usual to assume that "the state of the arts remains unchanged," which is,

[•] Cf. Böhm-Bawerk, Capital and Interest, Books II, and IV., as well as the Introduction and chaps. iv. and v. of Book I. Böhm-Bawerk's discussion bears less immediately on the present point than the similarity of the terms employed would suggest.

for all purposes but that of a doctrine of profits per cent., an exclusion of the main fact. Investments may, further, be transferred from one enterprise to another. Therefore, and in that degree, the means of production are "mobile."

Under the hands of the great utilitarian writers, therefore, political economy is developed into a science of wealth, taking that term in the pecuniary sense, as things amenable to ownership. The course of things in economic life is treated as a sequence of pecuniary events, and economic theory becomes a theory of what should happen in that consummate situation where the permutation of pecuniary magnitudes takes place without disturbance and without retardation. In this consummate situation the pecuniary motive has its perfect work, and guides all the acts of economic man in a guileless, colorless, unswerving quest of the greatest gain at the least Of course, this perfect competitive system, sacrifice. with its untainted "economic man," is a feat of the scientific imagination, and is not intended as a competent expression of fact. It is an expedient of abstract reasoning; and its avowed competency extends only to the abstract principles, the fundamental laws of the science, which hold only so far as the abstraction holds. But, as happens in such cases, having once been accepted and assimilated as real, though perhaps not as actual, it becomes an effective constituent in the inquirer's habits of thought, and goes to shape his knowledge of facts. It comes to serve as a norm of substantiality or legitimacy; and facts in some degree fall under its constraint, as is exemplified by many allegations regarding the "tendency" of things.

To this consummation, which Senior speaks of as "the natural state of man," human development tends by force of the hedonistic character of human nature; and in terms of its approximation to this natural state, therefore, the immature actual situation had best be stated. The

^{*} Political Economy, p. 87.

pure theory, the "hypothetical science" of Cairnes, "traces the phenomena of the production and distribution of wealth up to their causes, in the principles of human nature and the laws and events - physical, political, and social - of the external world." * But since the principles of human nature that give the outcome in men's economic conduct, so far as it touches the production and distribution of wealth, are but the simple and constant sequence of hedonistic cause and effect, the element of human nature may fairly be eliminated from the problem, with great gain in simplicity and expedition. Human nature being eliminated, as being a constant intermediate term, and all institutional features of the situation being also eliminated (as being similar constants under that natural or consummate pecuniary regime with which the pure theory is concerned), the laws of the phenomena of wealth may be formulated in terms of the remaining fac-These factors are the vendible items that men handle in these processes of production and distribution; and economic laws come, therefore, to be expressions of the algebraic relations subsisting between the various elements of wealth and investment, - capital, labor, land, supply and demand of one and the other, profits, interest, wages. Even such items as credit and population become dissociated from the personal factor, and figure in the computation as elemental factors acting and reacting through a permutation of values over the heads of the good people whose welfare they are working out.

To sum up: the classical economics, having primarily to do with the pecuniary side of life, is a theory of a process of valuation. But since the human nature at whose hands and for whose behoof the valuation takes place is simple and constant in its reaction to pecuniary stimulus,

^{*}Character and Logical Method of Political Economy (New York, 1875), p. 71. Cairnes may not be altogether representative of the high tide of classicism, but his characterization of the science is none the less to the point.

and since no other feature of human nature is legitimately present in economic phenomena than this reaction to pecuniary stimulus, the valuer concerned in the matter is to be overlooked or eliminated; and the theory of the valuation process then becomes a theory of the pecuniary interaction of the facts valued. It is a theory of valuation with the element of valuation left out,—a theory of life stated in terms of the normal paraphernalia of life.

In the preconceptions with which classical economics set out were comprised the remnants of natural rights and of the order of nature, infused with that peculiarly mechanical natural theology that made its way into popular vogue on British ground during the eighteenth century and was reduced to a neutral tone by the British penchant for the commonplace - stronger at this time than at any earlier period. The reason for this growing penchant for the commonplace, for the explanation of things in causal terms, lies partly in the growing resort to mechanical processes and mechanical prime movers in industry, partly in the (consequent) continued decline of the aristocracy and the priesthood, and partly in the growing density of population and the consequent greater specialization and wider organization of trade and business. The spread of the discipline of the natural sciences, largely incident to the mechanical industry, counts in the same direction; and obscurer factors in modern culture may have had their share.

The animistic preconception was not lost, but it lost tone; and it partly fell into abeyance, particularly so far as regards its avowal. It is visible chiefly in the unavowed readiness of the classical writers to accept as imminent and definitive any possible outcome which the writer's habit or temperament inclined him to accept as right and good. Hence the visible inclination of classical economists to a doctrine of the harmony of interests, and their somewhat uncircumspect readiness to state their

generalizations in terms of what ought to happen according to the ideal requirements of that consummate Geldwirtschaft to which men "are impelled by the provisions of nature." * By virtue of their hedonistic preconceptions, their habituation to the ways of a pecuniary culture. and their unavowed animistic faith that nature is in the right, the classical economists knew that the consummation to which, in the nature of things, all things tend, is the frictionless and beneficent competitive system. This competitive ideal, therefore, affords the normal, and conformity to its requirements affords the test of absolute economic truth. The standpoint so gained selectively guides the attention of the classical writers in their observation and apprehension of facts, and they come to see evidence of conformity or approach to the normal in the most unlikely places. Their observation is, in great part, interpretative, as observation commonly is. What is peculiar to the classical economists in this respect is their particular norm of procedure in the work of interpreta-And, by virtue of having achieved a standpoint of absolute economic normality, they became a "deductive" school, so called, in spite of the patent fact that they were pretty consistently employed with an inquiry into the causal sequence of economic phenomena.

The generalization of observed facts becomes a normalization of them, a statement of the phenomena in terms of their coincidence with, or divergence from, that normal tendency that makes for the actualization of the absolute economic reality. This absolute or definitive ground of economic legitimacy lies beyond the causal sequence in which the observed phenomena are conceived to be interlinked. It is related to the concrete facts neither as cause nor as effect in any such way that the causal relation may be traced in a concrete instance. It has little causally to do either with the "mental" or with the "physical"

* Senior, Political Economy, p. 87.

data with which the classical economist is avowedly employed. Its relation to the process under discussion is that of an extraneous—that is to say, a ceremonial—legitimation. The body of knowledge gained by its help and under its guidance is, therefore, a taxonomic science.

So, by way of a concluding illustration, it may be pointed out that money, for instance, is normalized in terms of the legitimate economic tendency. It becomes a measure of value and a medium of exchange. It has become primarily an instrument of pecuniary commutation, instead of being, as under the earlier normalization of Adam Smith, primarily a great wheel of circulation for the diffusion of consumable goods. The terms in which the laws of money, as of the other phenomena of pecuniary life, are formulated, are terms which connote its normal function in the life history of objective values as they live and move and have their being in the consummate pecuniary situation of the "natural" state. To a similar work of normalization we owe those creatures of the mythmaker, the quantity theory and the wages-fund.

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THE SETTLEMENTS WITH THE PACIFIC RAILWAYS.

WITH unexpected smoothness and rapidity the settlement of the debts due to the United States from the Pacific railways has been accomplished. Therewith closes a striking chapter in the history of transportation in the United States. The Union and Central Pacific roads. creatures of the government, long its special care, the targets for unnumbered debates and plans and attacks, have severed once for all their relations with the federal authorities, and have become great railway corporations of the usual type. This result has been reached by a process which is simple enough, but which, none the less, would have seemed a few years ago highly improbable to the best-informed observers,—by the payment to the government, or ample guarantee of the payment, of the huge sum of the principal and accumulated interest of its loans of thirty years ago. Dreams of a possible disrupting of the companies, of the formation of a new transcontinental line under government ownership, have vanished. Some record of this concluding stage in the great subsidy operations is here offered, to which, for completeness of statement, even though at the risk of repeating familiar history, is prefixed a sketch of the events which led up to the final settlements.

The Pacific Railway Act of 1862 offered the Union Pacific Railroad Company and the Central Pacific Railroad Company a subsidy consisting of a land grant of about thirty-three million acres and a loan of the credit of the United States. The loan was in the form of government bonds at the rates of sixteen, thirty-two, or forty-eight thousand dollars a mile, according to the nature of the country traversed by the railway. The United States

was to be secured by a first mortgage upon the completed Upon these terms, however, the Union Pacific and Central Pacific Railroad Companies were unable to raise capital; and in 1864 Congress doubled the land grant, and contented itself with a second mortgage as security for its advances of bonds. The estimates of the cost of the proposed railroads were pure guess-work; the bond subsidy was of uncertain value, since the principal and interest of the bonds were payable in currency; and, finally, the prospects of the railways after completion were exceedingly doubtful. For these reasons some men of weight in the world of finance persisted to the last in esteeming the Pacific lines hare-brained schemes. promoters themselves had to pledge their whole fortunes in order to secure the co-operation of capitalists, and more than once were in imminent danger of bankruptcy. The final success of the scheme was due largely to the discovery of an easy means of crossing the Sierras and to the importation of Chinese labor.

The funds required for the building of the Union Pacific and Central Pacific Railroads were raised by the sale of the government bonds and of first mortgage, land, income, and other bonds. The stock that was issued was thrown in as a bonus to the promoters. Its value depended partly upon the earning powers, - actual and prospective, -- partly upon the fact that the ownership of the stock carried with it the control of the railroads. That of the Central Pacific, or a majority of it, remained in the hands of the original promoters of the road. That of the Union Pacific, on the other hand, immediately found its way into the open market, and soon became a gambling stock on the New York Stock Exchange. Both stocks ultimately rose to par, and were profitable during the years in which the Union Pacific and Central Pacific Railroads had a monopoly of the transcontinental traffic by rail.

In the years from 1860 to 1880 almost all railway building in the United States was highly speculative. Promoters expected to make a profit out of the construction itself, issuing as many bonds as the market The stock was generally thrown in as would absorb. a bonus to make the bonds more salable. The incorporators of railways also had recourse to construction companies for the purpose of limiting their liabilities and their chances of loss. The construction companies and the methods employed in general for the purpose of tempting capital into railway building unquestionably led to great abuses. They brought about a separation between the interests of the railway builder and manager and those of the persons who had furnished the capital for the building of the railway. And if it be urged that in the operations of the Union Pacific and Central Pacific construction companies — the Credit Mobilier of America for the former, and the Contract and Finance Company for the latter - the rights of the United States as a creditor of the companies were ignored, it should be remembered that, in this respect, the experience of the United States was but the too common experience of railway investors in the period from 1860 to 1880.

Congress in 1864 had enacted that the Pacific railways should pay annually to the government at least 5 per cent. of their net earnings, and that, in addition, the United States should withhold one-half of the sums due to the railways for transportation services rendered. It was hoped that these two sums would offset the payments annually to be made by the government on account of interest on the bonds issued to the railways. But this hope was disappointed from the start. In 1872 Congress attempted to withhold the whole amount annually due from the government to the railways for transportation. But at the same time the railways were allowed to appeal to the Court of Claims; and that tribunal, as well as the

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Supreme Court, held that under the acts of 1862 and 1864 there was no authority to withhold more than onehalf the sums due for services rendered. The indebtedness of the Pacific railways to the government under these conditions increased year by year. At the same time the roads began to pay dividends, the Central Pacific in 1872 and the Union Pacific in 1875, on stock which represented no investment of capital. In 1873, when the Wilson Committee made its report upon the relations between the Credit Mobilier and the Union Pacific Railroad Company, Congress directed the Attorney-General to bring suit in equity in the name of the United States against the Union Pacific Railroad Company and against all persons who had received stock in the road without paying for the stock in full in money. The theory on which this proceeding rested was that the property of the Pacific roads was held in trust by the companies for the payment to the United States of the subsidy bonds. relief asked for was that the moneys and property alleged to have been wrongfully diverted from the treasury of the Union Pacific Railroad to the pockets of certain officers and stockholders of the company, be restored to the railroad corporation or to the United States, whichever should in equity be entitled thereto. The Supreme Court, however, held that the bond subsidy created nothing in the nature of a trust, but was an absolute grant without precedent condition. It held that under the acts of 1862 and 1864 the United States was in the position of an ordinary creditor, and that redress for the alleged fraudulent actions could be obtained only in a suit brought by the corporation or one of its shareholders, and not in a suit by the United States. Thus it was settled that the doings of the construction companies — the Credit Mobilier and the Contract and Finance Company - were not matters in which, at law, the government of the United States had any special concern. Yet

it is certain that the alleged fraudulent doings of those companies remained a potent cause of the opposition to measures presented from time to time for the adjustment of the indebtedness of the Pacific railroads.

The decision of the Supreme Court in the Credit Mobilier case was delivered in 1878, at the time of the Granger movement and the general ferment of opinion on the railway question. Congress now endeavored to meet the situation by the exercise of its power as the sovereign law-giver. In the Thurman Act of 1878 it was enacted that the whole of the sum annually due from the government on account of services rendered by the Pacific railroads should be withheld. One-half of that sum was to be applied annually on the debt due to the government. The other half, together with 5 per cent. of the net earnings of the roads, was to be invested at compound interest in a sinking fund, which was to consist of United States bonds. In addition, the Union Pacific was to pay into the sinking fund each year \$850,000, and the Central Pacific was to pay \$1,200,000, with the proviso that neither company should pay into the sinking fund more than 25 per cent. of the net earnings.

The sinking fund of the Thurman Act was expected to take care at least of the first mortgage on the Pacific railways and possibly also of the second mortgage, when those two liens should become due in the years 1895-99. But for one reason and another this expectation was completely disappointed. The monopoly of the transcontinental traffic by rail held by the Central Pacific and Union Pacific, and the monopoly of the local traffic held by the Union Pacific, were broken down in 1883 by the almost simultaneous completion of several competitive routes,—the Southern Pacific, the Northern Pacific, the Atchison, Topeka & Santa Fé, and the Chicago, Burlington & Quincy roads. In consequence the net earnings of the Central and Union Pacific fell off to such an extent that the payments

on account of the \$850,000 and \$1,200,000 provisions became inconsiderable. In the second place, the sudden improvement in the credit of the United States after 1879, and the advance in the price of its bonds caused the sinking fund to bear little more than 2 per cent, interest: and at times it lay idle altogether. On the other hand, the United States was paying, year by year, interest at the rate of 6 per cent. on the subsidy bonds which it had issued for the roads; and year by year this accumulating amount was charged to the debt which they must ultimately repay to the government. To this obligation, certain to be presented in troublesome form even though at a date which may have seemed distant, managers of the roads at this time paid apparently no attention. Thurman Act was allowed to work out its unexpectedly slight results; and the net indebtedness of the roads to the United States, so far from declining, continued to increase year by year.

Meanwhile, the situation was being complicated in another direction,—by the changes in the organization and the ramifications of the railway systems themselves. The Central Pacific Railroad was absorbed by the Southern Pacific Company of Kentucky; and the Union Pacific Railroad developed into the Union Pacific System.

At a very early date the promoters of the Central Pacific entered upon the policy of building to the most populous and most productive parts of California; leasing the lines, when completed, to the Central Pacific Railroad Company. They also built from Goshen, in Southern California, across Arizona, New Mexico, and Texas to New Orleans, where connection was made by steamships with the Atlantic seaboard cities. In 1885 the whole complex of lines was subdivided into two systems,—one comprising the Central Pacific and all lines north of Goshen, the other comprising the southern transcontinental line, or Southern Pacific, and all lines south of Goshen. Both

systems were leased to the Southern Pacific Company of Kentucky, a corporation controlled by the builders of the Central and Southern Pacific lines. Under the lease of 1885 the Southern Pacific Company of Kentucky assumed the payment of the obligations of the Central Pacific as regarded interest on its funded debt and the sums annually due to the United States under the Thurman Act; but it assumed no responsibility for the principal of the Central Pacific indebtedness. It has often been charged that the Southern Pacific of Kentucky systematically diverted traffic from the Central Pacific line to the Southern Pacific, for the purpose of keeping down the net earnings of the former, and so reducing the payments due to the United States. But it is probable that an inquiry into the facts would at any time have led to the conclusion reached in 1894 by Sir Rivers Wilson, the representative of the English shareholders of the Central Pacific, who then reported that there did not appear sufficient grounds to support the charge of unfair diversion of traffic from the Central Pacific. The truth is that in length of haul by rail, in ease of grades, and in freedom from obstruction by snow and ice, the Southern Pacific has very decided advantages over the Central Pacific.

The Union Pacific Railroad Company in 1877 began the policy of acquiring control of auxiliary lines, in order that it might keep pace with the growth of the territory tributary to it and meet the competitive building of other trans-Missouri lines. But not until after the consolidation with the Kansas Pacific and Denver Pacific in 1880 did it pursue vigorously the policy of expansion. In 1881 it met the construction of the Southern Pacific by seeking an outlet to the north-west Pacific coast. Thus it finally acquired the Oregon Short Line & Utah Northern Railway, together with the Oregon Railway and Navigation Company. These lines carried it to important points in the Pacific north-west,— to Butte City, Montana, to Spokane

Falls, Washington, and to Portland, Oregon. From the latter place the Union Pacific operated steamship lines to San Francisco. Somewhat later it pushed its operations into the south-west, obtaining access to Fort Worth, Texas, by means of the Union Pacific, Denver & Gulf Railway. By 1890 the Union Pacific System had come to comprise, in addition to the Union Pacific and Kansas Pacific main lines, some 5,900 miles of auxiliary lines, and had under operation a total of 7,700 miles. This vast system was held together through the Union Pacific Railway Company's ownership of stocks and bonds of the auxiliary lines; for the charter of the Pacific roads had given the companies no power to build new lines directly or to incorporate by consolidation any lines of railway other than those mentioned in the acts of 1862 and 1864.

The policy of acquiring auxiliary lines has been the subject of adverse comment, sometimes of bitter attack, under the mistaken notion that it was a drain upon the resources of the Union Pacific. To persons not conversant with railway operations, it does not readily appear how a branch line which does not pay for itself may yet be a source of profit in providing the main line with traffic hauled long distances at low cost. Then, again, the device of constructive mileage, made use of in dividing the earnings between the branch lines and the parent line, readily lends itself to misunderstanding and misinterpretation. On the other hand, it must be admitted that the terms upon which some of the branch lines were secured were not above criticism. Yet, upon the whole, the policy of expansion was pursued with honesty and wisdom; and among persons competent to judge there is no difference of opinion as to the absolute necessity of auxiliary lines for the Union Pacific main line.

In 1893 the Union Pacific Railway Company passed into the hands of receivers. A general reorganization

committee was at once formed to protect the many interests which had been brought together under the Union Pacific System. It soon became evident that no headway could be made with reorganization until provision should have been made for the claims of the government, which would come due in the years from 1895 to 1899. In January, 1895, the Union Pacific Railway Company offered to refund the government's entire claim, principal and interest, in fifty-year 2 per cent. bonds. The interest on these fifty millions would have yielded to the government each year a sum more than sufficient to meet the annual interest on the United States subsidy bonds, if these bonds, as they matured, had been refunded at a lower rate of interest. In addition, it was proposed to raise by assessment on the Union Pacific Railway Company stock some twenty millions in cash. This sum and the fourteen millions in the sinking fund were to be used in paying off the bonds which had priority over the lien of the United States. Finally, the ultimate payment of the refunded debt was to be secured by sufficient sinking fund provisions. offer was commonly thought a reasonable one; yet, as public opinion and Congressional tactics stood, it was hopeless to expect its acceptance. Congress adjourned without taking action; and the reorganization committee disbanded in March, 1895.

By this time separate receivers had been appointed for the Union Pacific, Denver & Gulf, for the Denver, Leadville & Gunnison, and for the Oregon Railway and Navigation Company. There was the possibility also of a separate receivership for the Oregon Short Line & Utah Northern Railway. There had been a struggle among the holders of the securities of the various subsidiary companies, each group seeking to put itself in position to form an alliance with some other system, should the Union Pacific System be broken up. The Union Pacific Railway Company therefore was in danger not only of

losing through foreclosure its valuable equities in the various subsidiary companies, but also of being reduced to the position of a trunk line without feeders of its own, dependent for freight upon traffic arrangements made with rival systems.

In January, 1897, still another proposal for settlement came up, and reached at least the stage of a vote in the House of Representatives. On that date, the House rejected, by a vote of 167 to 102, the Powers Bill. That measure proposed to allow the Union Pacific Railway Company to issue fifty-year 4 per cent. first mortgage bonds to the face value of all outstanding first mortgage bonds,—\$54,731,000. The debt due to the government was to be refunded in 2 per cent. fifty-year second mortgage bonds, with a lien on the total property of the company. The original lien of the government had not applied to those portions of the Union Pacific and Kansas Pacific roads which had been built without recourse to the proceeds of the subsidy bonds; that is, it did not cover the terminal properties at Omaha, Council Bluffs, and Kansas City, nor any part of the Kansas Pacific road west of a point three hundred and ninety-four miles west of Kansas City. The Powers Bill also provided for stated annual payments on account of the principal of the proposed second mortgage bonds,—\$365,000 annually for the first ten years, \$550,000 annually for the second ten years, and thereafter \$750,000 a year. The proposal again was not an unreasonable one, and again it was rejected. Before the vote on the bill proper the House rejected also a substitute providing for a commission to settle or compromise the indebtedness of the Pacific railroads; and rejected, too, a substitute for funding at 3 per cent. the debt due to the government. The arguments on these proposals had but little relevancy to the question They consisted mainly of the repetition of charges, by this time flat and stale, against the Credit

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Mobilier, and of similar charges as to the diversion of traffic from the Central Pacific to the Southern Pacific and the diversion of earnings from the Union Pacific to its auxiliary companies. The debate as a whole deserved the comment which a prominent member of the Pacific Railroads Committee applied to his own speech. Most of what he had been saying, he frankly admitted, was foreign to the real question at issue,—the adjustment on a business-like basis of the claims of the government; but he wished to show that Congressmen were under no moral obligation to deal leniently with those who had made immense fortunes out of the bounty of the government and had shamefully abused the confidence and generosity of their predecessors. But the opposition rested not merely on this general unwillingness to any action savoring of accommodation to guilty corporations. It was powerfully strengthened by the strong wish of the Western Congressmen, especially those from California, to force foreclosure under the government mortgage. Foreclosure by the government was desired, in the hope that it would result in one through line, consisting of the Central Pacific and Union Pacific operated as one road, which would break the monopoly of railway transportation in California which had been enjoyed for many years by the owners of the Southern Pacific. For the chance of securing this outcome the House of Representatives did not hesitate to leave the government in a position where the sale of the claim of the United States at a heavy sacrifice might be the alternative to its becoming the owner of the torso of a main line.

Meanwhile, steps had been taken in another direction, and on a different plan for securing some action on the part of the government. Proceedings were instituted to foreclose the first mortgage bonds of the Union Pacific, interest on which had been in default since 1893, and whose lien applied to those parts of the main line subject

to the government's second lien. Under the act of March 3, 1887,* it had been made the duty of the President to direct proceedings for the protection of the interests of the United States, by redemption or by foreclosure provisions. The executive branch of the government. and not Congress, was now to be dealt with, and, indeed, was compelled to show its hand under penalty of letting the entire claim of the United States go by the board. A new reorganization committee had been formed in October, 1895, representing the holders of first mortgage bonds of the Union Pacific and Kansas Pacific divisions; and the Attorney-General (Mr. Harmon) agreed with that committee in January, 1897, immediately after the rejection of the Powers Bill, to bring suit for the foreclosure of the government's lien at the same time that the committee should bring suit for the foreclosure of the first mortgage lien. In consideration of this understanding the reorganization committee guaranteed a minimum bid of \$45.754.000 for the government's claim. The cash value of the sinking fund in the Treasurer's hand was about sixteen and one-half millions, leaving some twentynine millions to be raised by the committee. To secure that sum, it would be necessary to sell about thirty-three and one-half millions of the proposed issue of one hundred million new first mortgage 4 per cent. bonds. The interest on those bonds would call for something more than \$1,300,000 a year, or about a hundred thousand dollars more than the Union Pacific Railway Company had been paying in recent years on account of its debt to the government. Reorganizations of bankrupt properties are not ordinarily made on the basis of in-

^{*}This act provided primarily for the appointment of a commission to investigate the books, accounts, and methods of the bond-aided Pacific railroads. It also directed the President to take action to protect the interests of the United States, should any suit be brought for the foreclosure of any lien prior to the government's claim. Finally, it permitted the investment of the sinking fund moneys in the first mortgage bonds of the Pacific railroads. This last provision, however, proved of little value to the railroads.

creased fixed charges; and, considering the disturbed state of affairs at that date (the Treasury was far from prosperous, and the Venezuela episode was not out of the way), the offer of forty-five and three-quarters millions would seem to have been not illiberal. At any rate, "rights" to participate in the undertaking of the syndicate formed to raise the money required under the guaranteed bid were being offered in the early part of 1897 at a discount of $2\frac{1}{2}$ per cent.

Some of the decrees rendered in the foreclosure suits proved unsatisfactory to the government. It was adjudged that a certain Omaha bridge mortgage for \$1,200,-000 was a lien prior to the claim of the United States; and it was ordered that moneys and assets accruing in the hands of the receivers should not be reserved to meet any deficiency judgment obtained by the government. When the reorganization committee learned that the government for these reasons was preparing papers for an appeal, the committee raised its guaranteed bid to fifty millions. The Attorney-General (Mr. McKenna, under the new administration) in October stated that the increase removed the objections to the decrees so far as the money contentions were concerned. In all else the decrees were satisfactory; and the government was willing that the sale should proceed. But there was clamor against what was styled an attempt to rob the government; and it was stated in the press that, if time were given, opposition syndicates would be formed to outbid the reorganization These charges proved the more embarrassing to the administration because certain Wall Street rumors gave them some measure of plausibility. It was alleged that support had been secured for a syndicate which was ready to raise seventy million dollars. These allegations grew stronger as the day fixed for the foreclosure sale approached; and on October 25 the Attorney-General notified the committee that the government had applied to the court to have the sale postponed from November 1 to December 15. On the latter date Congress would be in session, and able, if it pleased, to take action. The committee, unwilling to risk further intervention by Congress, raised the guaranteed minimum bid on the Union Pacific line to the full amount of the government claim, principal and interest,—more than fifty-eight millions in all. The previous bids had been for both the Union Pacific and Kansas Pacific lines; but, the latter not being essential for the proposed reorganization, the bid as to it was withdrawn. For the Union Pacific alone the offer was eight millions more than the preceding offer for both lines taken together.

Thus the United States secured from the Union Pacific the unabated amount of its claim in hard cash. There were abundant circumstances that might have been adduced in justification of a less exacting bargain. The prolonged payment of interest at 6 per cent. by the government on its subsidy bonds greatly swelled the amount of the accumulating debt; yet in the course of the thirty years the current rate had fallen much lower, and the rate for the government itself to one-half of 6 per cent. On the investment which the government had compelled the company to make in the sinking fund of the Thurman Act, hardly 2 per cent. had been earned for the beneficiary. Quite apart from any such considerations of equity, it is not to be doubted that, having regard to the condition of the railway itself and to the general business situation, any of the proposals made in 1895-97 would have been found acceptable by a private creditor. The first offer from the reorganization committee, acceded to by the government in 1897, of 45.7 millions, was thought at the time to be an excellent bargain for the United States. That enough was successively added to meet finally the full claim, was due in some degree to the general revival of activity and the

better prospects of all railway properties; but even more, probably, to the fact that the reorganization committee had gone too far to be able to retrace its steps. For various reasons it was anxious to avoid the possibility that Congress, yielding to the pressure which had defeated the Powers Bill, should overthrow the proposed settlement. The failure to carry the reorganization through would have had a depressing effect in the financial world, undermining the confidence just being re-established. This, in turn, would have affected adversely many other large affairs and interests in which the individuals taking part in the reorganization were involved. Moreover, the committee had made heavy engagements and contracts, from which it could not retreat without great confusion, if not loss. A syndicate had been formed to advance on thirty days' notice some forty-four million dollars. hensive plans had been made to recover the lines lost to the old Union Pacific System, among them an agreement to purchase the Oregon Short Line stocks, held by the firm of J. P. Morgan under an old trust indenture of 1891. Virtually, there was nothing to be done except to dispose of the government as an ugly partner by paying the full amount of its claim, - \$27,236,512 principal and \$31,211,712 interest. The formal end of this operation came on November 6, 1897, when the sale of the Union Pacific main line to the reorganization committee was confirmed.

The Kansas Pacific had been left out of the arrangement when the Union Pacific bids were raised. The disposal of this line dragged on, and, indeed, has not yet been completed. On February 9, 1898, the Secretary of the Treasury made a move for foreclosure by issuing a warrant for \$7,515,255 in favor of the Treasurer of the United States, to be used in the purchase of the first mortgages on the parts of the Kansas Pacific covered by the government lien, unless a satisfactory agreement

should be reached for the settlement of the government's claim. Three days later the reorganization committee guaranteed the government the amount of the principal of its debt (\$6,300,000), and the sale was allowed to proceed. On the 16th of February the property was sold, the United States receiving nothing for its claim on account of interest, amounting to \$6,627,000.*

The Union Pacific being disposed of, the settlement with the Central Pacific was made with comparative ease. The possibility of a union of the two lines as a government road was gone, and there was no ground for further opposition in Congress to the readjustment of the Central Pacific's debt. The Deficiency Appropriation Act of July, 1898, appointed the Secretary of the Treasury, the Secretary of the Interior, and the Attorney-General commissioners to effect a settlement between the United States and this railway. Under the agreement, approved by the President on February 15, 1899, the government's claim, amounting to \$27,855,680 on account of principal and \$30,957,035 on account of unreimbursed interest, was disposed of in full, by being refunded in twenty equal notes, payable, respectively, on or before the expiration of each successive six months for ten years. The notes bear interest at 3 per cent.; and, if default be made in any payment of principal or interest, all of the notes immediately become due and payable. The payment of the principal and interest is secured to the government by the deposit in its hands of \$58,820,000 (out of a total issue of one hundred millions) first refunding 4 per cent. gold bonds issued by the Central Pacific Railroad Company or

The Department of Justice has instituted proceedings, however, against the reorganized Union Pacific Company for \$6,588,900 with interest. There had been left over in the hands of the receivers of the old corporation some assets not covered by any specific lien, and therefore available for payment of the general obligations of the company. The value of these assets has been estimated to be about four million dollars. The total amount of claims presented against them, among which the government demand figures, is close on sixty millions.

its successor in the ownership of the property covered by the bonds. These bonds are a first charge on all the property of the company; and the issue has been used, in part, to retire the old first mortgage bonds whose lien was prior to that of the United States. They affect not only the subsidized line, but all the lines and the equipment and terminals of the company owned at the time of the approval of the agreement. The second mortgage formerly held by the United States, it will be remembered, had not covered the valuable terminal properties at Oakland and San Francisco. Substantially, the government claim, for principal and interest taken together, is extended at 3 per cent., with provision for payment by instalments in the course of ten years and with security certainly more ample than it had been before the settlement. The terms are but little more favorable to the government than those of the several proposals made to it of late years; and they are distinctly less favorable than in the case of the Union Pacific, where it got its cash once for all.

Some minor items of the bond subsidy operations of thirty years ago may be referred to. The Sioux City & Pacific Railroad, running from Missouri Valley in Iowa to Sioux City, and now forming a branch of the Chicago & North-western System, received a bond subsidy; and the United States has a second mortgage of \$1,628,300, not including interest. It does not appear what action has been taken regarding this line. The central branch of the Union Pacific, running from Atchison to Waterville in Kansas, was similarly subject to a claim for \$1,600,000. It was long under lease to the Missouri Pacific System, and in 1898 it was sold in order to satisfy a lien having priority over the government lien. Apparently, no steps were taken to enforce the government's claim; and the line is now owned and operated by the Missouri Pacific.

For the government the whole outcome has been finan-

cially not less than brilliant. Not only the principal of the debt, but the accumulated mass of interest payments, has been recouped by the subsidized railways,—a result, as has already been said, which would have been thought a few years ago virtually impossible. It may be a question whether the precise mode in which this success was achieved, in the case of the Union Pacific, deserves unqualified commendation; yet it may also be urged that the representatives of the government had no other course than to press its claim to the end without discount. the community it is certainly a gain that the Pacific railways question disappears from the political field, and that no more is to be heard of the rumors and charges - half true and half false - as to intrigue, corruption, blackmail, demagogism. For the railways, too, it is no less a gain that they are no longer to be trammelled by the constant friction in Congress and the uncertainty as to their financial basis. As to the project of creating a governmentowned competitive transcontinental route out of the subsidized lines, that, too, is well out of the way. Whether or no public ownership be thought likely to yield a balance of gain in the United States, - and few sober thinkers would regard this as one of the good moves for the visible future,— the plan of such a competitive trunk line offered all the evils and few of the gains of public management. The peculiar situation on the Pacific coast, and especially in California, made the project naturally a tempting one for that part of the country; but this remedy was both drastic and unpromising, and the unfortunate thing is that no remedy at once safe and promising is in sight. Taking the general railway situation in the United States as it stands, the settlements with the subsidized railways are to be welcomed and approved: nothing is made worse, and some things are made better.

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NOTES AND MEMORANDA.

THE FRANCHISE TAX LAW IN NEW YORK.

Much interest has been manifested throughout the country in the passage of the recent franchise tax law in New York. This interest is partly due to the effective manner in which Governor Roosevelt forced the passage of the bill. Up to the last moment the vote on the original Ford Franchise Bill was in doubt, and would have remained so but for the emergency message sent to the legislature in its closing hours. Further consideration, however, convinced the governor of the advisability of certain amendments to the bill; and a special session of the legislature was summoned for this purpose. Practically no other business was transacted; and here, again, it was the clearly expressed determination of the governor to sign the original bill unless the amendments were adopted, which whipped into line the Republican majority and brought about the final passage of the law as it now stands.

Readers of this Journal need not be informed as to the nature of franchise taxation. The whole conception is a legal rather than an economic one, and its recent growth in the United States is due largely to the prevalent system of the general property tax. In Europe there is no such problem as the taxation of corporate franchises, because corporations are subject either to the general income tax, as in England, Germany, and Italy, or to the special business tax, as in France. Under our American system, however, corporations have usually been liable to the general property tax. The tangible corporate property has always been reached, but the intangible property has thus far escaped the scrutiny of the assessor with almost as much success as has the intangible property of individuals. When taxation is confined to realty and tangible personalty, it evidently becomes necessary, in order to reach the actual value of the property of the corporation,

to add to the tangible property something else representing its capitalized earning capacity. This something else is what is ordinarily termed the franchise,—the privilege accorded by the government to the corporation to carry on the business. The tax imposed on this privilege, known as the franchise tax, is therefore supplementary to the tax upon tangible property.

The idea of a franchise tax in this sense is not altogether new to New York State. For some time New York, like Pennsylvania and other States, has had a system of franchise taxes on corporations for State purposes. These taxes have been levied upon the capital stock in accordance with the amount of dividends paid, or they have been assessed in a certain proportion to gross earnings. The system in New York, however, differs from that in Pennsylvania and in several other States, in that the taxation of corporations for local purposes is still carried on under an old law which, handed down from earlier times, has remained intact for almost half a century. Corporations are liable for local purposes on their general property. That is to say, not only the real estate, but all the personalty, tangible and intangible, of corporations, is locally taxable. The local assessors, following time-honored practice, place an arbitrary valuation upon the capital stock, from which is deducted the value of the realty. The present franchise tax law is partly the result of a recent unsuccessful endeavor on the part of the Brooklyn assessors to increase the assessment of a local corporation. The assessors in this case, when they made up their valuation upon the capital stock, increased it substantially on the ground that the property had become more valuable because of the augmented value of the franchise. The court, however, held that the value of the franchise ought not to be considered in estimating the value of the taxable personalty. Since debts are deductible from personalty in New York, the corporation in question was able to deduct its entire bonded indebtedness from the value of the stock; and it might well happen that, where the bonded indebtedness exceeded the capital stock, a corporation would be taxable on its real estate only. It was partly to remedy this condition of affairs that the franchise tax bill was introduced.

The new act does not apply to all franchises or to all corporations; and the tax system in New York, as now amended, differs from that of many other States. No less than three kinds of corporate franchises are at present taxable in New York. The first is the general privilege extended by the government to become a corporation. For this privilege payment is made in the so-called incorporation fees, known under various names throughout the country. The second kind of "franchise," taxable for all corporations in New York, is the privilege to carry on the business. To use the words of a recent decision of the United States Supreme Court, it is a franchise to do, and not a franchise to be. Most of the so-called franchise taxes in the various commonwealths deal with this kind of a franchise. The new New York law, however, is intended to reach a third kind of franchise, - namely, the privilege conferred upon certain special corporations to make use of city streets and public places. This is manifestly a valuable privilege over and above the other privileges granted by the government. Legally, it may be conferred by the State; yet from the economic point of view it is a privilege granted by the locality. It is only to corporations possessing this particular privilege that the new law applies, and hence the franchises of such corporations are spoken of in the law as "special franchises." The statute prescribes that in estimating the value of property there shall be included "the value of all franchises, rights, authority, or permission to construct, maintain, or operate in, under, above, upon, or through any streets, highways, or public places any mains, pipes, conduits or wires, with the appurtenances for conducting water, steam, heat, light, power, telegraph, telephone, or other purposes." Taxable property shall also include "all bridges, all telegraph lines, wires, poles, and appurtenances, all supports and enclosures for electrical conductors and other appurtenances upon, above, and under ground; all surface, underground, or elevated railroads, including the value of all franchises, rights, or permission to construct, maintain, or operate the same in, under, above, on, or through streets, highways, or public places." The same section goes on to say that "a franchise, right, authority, or permission specified in this subdivision shall, for the purposes of taxation, be known as a special franchise." Finally, the act adds that "a special franchise shall be deemed to include the value of the tangible property of a person, copartnership, association, or corporation situated in, upon, under, or above any street, highway, public place or public way, in connection with a special franchise. The tangible property so included shall be taxed as a part of the special franchise."

Several considerations present themselves to our notice. In the first place, all the passages of the law quoted above are simply amendments of or additions to the general tax law which prescribes the assessment of real estate. The words "real estate" as used in the tax law are deemed to include the value of all such special franchises. It may of course be questioned whether the law is correct in classing a franchise as The objection, however, is in the main purely theoretical. From the abstract point of view it is immaterial whether we class such a franchise as personalty or as real estate. It is both, and it is neither. The real estate of a corporation is made valuable by the existence of the franchise in the same way that the personalty of the same corporation is made valuable by the existence of the franchise. The franchise might therefore be classed either as real or as personal property. The practical reasons, however, why the law declares such a franchise to be real estate lie on the surface. Under the New York system, as has already been pointed out, it is impossible to assess the franchise as personalty. Furthermore, even if it were assessed as personalty, there would always be a deduction for bonded indebtedness; and heavily bonded corporations would thus escape taxation. In the case of real estate, on the other hand, no such deduction is allowed. was therefore to meet the special complications of the New York statute that the special franchises have been made assessable as real estate. In many other States bonded indebtedness is not deductible from personalty, and there franchises might as well be declared to be personal property. In other States, again, mortgage debts are deductible from the value of the realty, while ordinary debts are not deductible from personalty. In such cases an effective levy could hardly be secured unless the franchise were classed as personal property. The

classification of special franchises as real estate, it must be repeated, is a peculiarity referable to that feature in the New York tax system which permits deduction of debt from personalty but not from realty.

The last clause in the section of the law quoted above needs a slight explanation. It was inserted to meet the special case of the gas companies or electric lighting companies which have pipes or conduits under ground and whose pipes or conduits are now already taxed as real estate. As pieces of old clay or metal, these pipes or conduits are of very little value. It was feared that injustice might be done to such corporations by adding the value of the franchise to the present assessment of the pipes, which derive their taxable value largely from the existence of the franchise. It was therefore deemed wise to provide that the value of the pipes should be included in that of the franchise.

Another important section of the law provides for deductions. Many corporations, under the legislation previously in force, are already paying in various ways considerable sums as franchise taxes. If the object of the new law was to make all corporations assume their fair share of the public burdens, it became necessary at the very outset to provide for the avoidance of double taxation. Some of the corporations in question already pay, for instance, a share of their gross earnings to the localities in which they happen to be situated. The value of a franchise, however, must depend upon the present and prospective earning capacity. To tax both the franchise and the gross earnings would, therefore, clearly constitute double taxation. It was hence provided that, when a corporation "has already paid to the locality any percentage of gross earnings or any other income or any license fee or any sum of money on account of such special franchise," the amount so paid shall be deducted from the tax on the special franchise. Certain charges, however, are not in the nature of taxes, but are to be included under what are technically known in public finance as fees or special assessments. Under this head would properly come moneys spent for paving or repairing of pavements. Such charges as these the new law specifically excepts from the deductions permitted from the franchise tax, just as in the case of private individuals an exemption from taxation is held not to include an exemption from special assessment.

Among the most important features of the law is the provision for the assessment of the special franchise by a State Board. It was deemed wise to place the assessment in the hands of the State Board in order to secure greater uniformity in the method of assessment. There is, moreover, manifestly far less probability of secret arrangements with the corporations than would be the case if the assessment were left to the local assessors. It was this provision of the law which encountered the chief opposition in the Assembly. The Democratic members, representing the interests of Tammany Hall, voted almost to a man against the bill for this reason. Rather than create a new body for this purpose, the whole matter has been put in the hands of the present State Board of Tax Commissioners. The duties of this Board have hitherto been simply to equalize the county assessments throughout the State. The new functions devolving upon them will make the Board one of far greater importance.

It is evident that the success or failure of the law depends upon the action of the State Board. It was considered best not to provide in the bill for hard and fast rules in the method of assessment. This was done in order to give the Board ample opportunity to learn by experience what would be the most practicable and the most equitable plan to pursue. There is every reason to hope that with the exercise of intelligence and prudence the State Board will be able not only to lay down uniform rules of assessment, but also to place upon the special franchise in any particular locality a value which is fairly equivalent to that put upon other tangible realty. It must be remembered that real estate in the cities of New York is assessed at rates all the way from fifty to seventy-five per cent. of the actual selling value. It is obvious that, if the special franchises of the corporations involved are assessed at their full value, there will be an unreasonable discrimination against the corporations. The suggestion was even made in the preparation of the bill that a clause be inserted providing that the franchises in question should not be assessed at a higher rate than other real estate in the locality. It was

clear, however, that such a provision would be self-stultification. The assessors are now required by law to take an oath that they will assess all real estate at its full market value, and the law cannot recognize the existence of a practice which is in direct violation of its own mandate.

Regarded as a whole, the new law may be said to mark a distinct advance in the tax system of New York. It will make those wealthy corporations which have thus far escaped payment of adequate and just taxes pay for the valuable local franchises which they possess. The assertion that the law will impose a burden upon the poorer and less powerful corporations is unfounded, since, to the extent that the corporations are unsuccessful, their franchises are so much less valuable and taxable accordingly. The change is to be commended if for no other reason than that under its detailed provisions we shall finally know what the corporations are actually paying in taxes. The revelation will, no doubt, surprise both the upholders and the opponents of the law. On the one hand, it will be discovered that many corporations pay in taxes far more than the general public suspects; and, on the other hand, it will be interesting to learn that a large number of the corporations are paying less in proportion to the actual value of their property than their rivals. The object of the present law has been declared by its framers and by the governor to be not the taxation of certain corporations more than others, or of corporate property in general more than other property, but the taxation of every one and of all property alike. special franchise which forms the subject of the tax increases the earning capacity of the corporation, and renders its property valuable. Considered from this point of view, the new law is a step in the direction of equality of taxation,—how great a step must depend very largely upon the action of the State Board of Tax Commissioners.

There remains one final word of comment. In the consideration of the bill in committee and in the House it was recognized that the whole measure is in a certain sense a clumsy one, but necessarily so because of the existing system of taxation in New York. More and more the legislators are awaking to the fact that the present scheme of the general property

tax requires amendment. It is significant evidence of the growing appreciation of the need for even wider changes that a legislative committee from both Houses was appointed, to sit during the recess and to prepare a general plan of reform; and it is gratifying to note that in this committee are to be found some of the ablest members of the legislature, who not only were the foremost in the passage of the franchise tax law, but are also thoroughly aware of the necessity of a reconstruction of the entire system of taxation.

EDWIN R. A. SELIGMAN.

COLUMBIA UNIVERSITY.

MUNICIPAL OWNERSHIP OF STREET RAIL-WAYS IN DETROIT.

The people of Detroit are persuaded that they enjoy the most convenient system of overhead-trolley railway lines to be found in this country. While there are three separate companies, all the lines are owned by the same persons and are managed substantially as one property. The lines in the main are well operated and well equipped. The rate of fare that prevails generally is five cents, six tickets being sold for a quarter. On some of the newer and less-frequented lines, however, eight tickets are sold for twenty-five cents,— a concession obtained by a new company that secured a franchise after a prolonged three-cent-fare controversy. owners of the old franchises secured the control of the new corporation, the charter rates had to be maintained. the hours from 5.30 to 7 A.M. and from 5.15 to 6.15 P.M. "workingmen's tickets" are sold on the old lines, at the rate of eight for a quarter. The ownership of the three systems is with Mr. R. T. Wilson, of New York City, who is well known as an investor in street railways; and with Hon. Tom L. Johnson, formerly a member of Congress from Pennsylvania, an advocate of the Henry George single-tax theory, a street railway manager, and a manufacturer of steel rails. Mr. Johnson is the manager of the properties.

The convenience of the system is due primarily to the manner in which Judge Woodward in 1805 was moved to lay out the new city after the total destruction by fire of the century-old French town of Detroit. Using L'Enfant's plan of Washington as a model, Judge Woodward platted broad avenues radiating from a common centre and extending to various points of the compass. As a result, all the main lines pass a given point; and by combining the routes on two thoroughfares, as, for example, Grand River and Jefferson Avenues, a passenger living in the extreme north-western portion of the city can be conveyed to the extreme south-

eastern section without change of cars. Moreover, by trackage arrangements with suburban railways, the cars of such companies are allowed to come to the centre of the city, so that passengers can board cars at the City Hall and be conveyed to the State University at Ann Arbor, forty miles distant; or to the great soda-ash plants, twelve miles down the river; or to the suburban residences at Grosse Pointe Farms, on Lake St. Clair; or to the mineral baths at Mt. Clemens, twenty miles away; or to the beautiful city of Pontiac, the seat of the State insane asylum, twenty-six miles from Detroit. Great passenger coaches, with mail, baggage, and light-freight facilities, rush through the streets with the speed of an express train; and the private car, with dining conveniences, marks the limit of convenience and pleasure. Such, in brief, is the Detroit street railway system.

As compensation for the privileges enjoyed under a thirtyyear charter, the roads pay a tax of 2 per cent. of gross earnings. The real estate is taxed, as is other such property.* The concession of "workingmen's tickets" is also estimated as part compensation to the city.

On March 24, 1899, Governor Pingree approved an act creating the Detroit Street Railway Commission of three members, to be appointed by the common council of Detroit; and to this commission power was given, in their discretion, to buy or lease from the various companies any of the street railways lying wholly within, or partly within and partly without, the city, and, when so acquired, to maintain and operate them for the carriage of passengers and freight for hire. The act provides that the purchase price is to be paid in 4 per cent. bonds, which shall be a lien upon the property; and authority is given to provide from the revenues of the roads a sinking fund for the payment of the bonds. But "the commission shall have no power to incur any obligation on behalf of said city, except such as shall be chargeable only upon the railways and property so acquired and the earnings and increments and exten-

This tax yields about \$20,000 per annum. The District of Columbia, containing about the same population as Detroit, receives 4 per cent. of gross earnings, or about \$73,000 a year. The rates of fare are the same, but there are no workingmen's tickets in the District of Columbia. The price of the Detroit properties is fixed at \$17,500,000 in bonds, of which amount \$70,000 in bonds is to be retained as operating capital.

sions thereof." In short, the act creates a commission to own, operate, and construct street railways; and, so long as a portion of any line shall be located within the city of Detroit, the road may extend to Chicago or to the Straits of Mackinac.

It is beyond dispute that this legislation, at once so extensive in its grant of power and so novel in its provisions, was secured at the instance of the owners of the railways of Detroit, represented by Mr. Tom L. Johnson, and that the measure had the active support of Governor Pingree, who has since become the head of the commission. The legislative history of the bill is comprised within one week, and it did not have the official support of the Detroit representatives in the legislature nor of the mayor of the city. Its passage was both hasty and unexpected. At the same time it can be said that probably a large majority of the people of Detroit were in favor of the ownership of the street railways by the municipality, while the representative business and professional men were opposed to such ownership.

In arriving at the price to be paid for the property, Mr. Johnson held that, besides the actual cash valuation of the lines, equipment, and real estate, he should be compensated for the value of the franchises, which value was to be based on the estimated profits that would accrue during the lifetime of the respective grants. He also stipulated that the bonds issued in payment should be secured by a mortgage covering not alone the property, but also a new franchise, running thirty years from the date of the purchase, if the bonds shall be paid at maturity, or forty-eight years in case of default and foreclosure. In short, he agreed to sell the roads to the city on such terms that, if municipal ownership should prove a failure, he would recover the roads and obtain an extension of his franchise. Moreover, he insisted that the new franchise should provide for the present rates of fare and taxation, so that he would not be bound to the three-cent fare in case the commission should fix that rate and should fail to make the roads pay.

Without stopping to discuss what mixture of philanthropy there may be in Mr. Johnson's motives,—although this subject has attracted much notice, especially in connection with his assertion that in the future people are to ride free,—it is to be discovered what economic reasons made such a sale seem so desirable to him that he was willing to take the steps necessary to obtain the required legislation. It is difficult for one to predict what may be all the motives, or even what the main motives, that actuate a street railway owner and manager in desiring to dispose of one of his properties; but some things appear on the surface.

In the first place, the prevailing sentiment in Detroit is now (as it has been ever since street railways were begun there in 1864) that the railway companies are not paying to the city a sufficient return for the privileges they enjoy; and it is well-nigh certain that, in the present state of feeling, no new franchise could be obtained by a private corporation on any fair terms. The city ownership of the tracks, and the leasing of them for a term of years to the highest bidder, is probably the utmost that could be hoped for. Mr. Johnson naturally wishes to dispose of bonds to cover the price he paid for the property; and this he cannot do to advantage with franchises the most important of which have but ten years to run, and in view of the virtual certainty that no renewal will be granted. Hence he is anxious to sell at his own price or something near it.

Incidentally, he may apprehend that within a few years the overhead trolley will become impossible in a city as compactly built as Detroit, and that the lines will have to be rebuilt to accommodate the underground system, the first cost of which is expensive, but the operation of which is comparatively cheap. The electrical equipment at Detroit is now at its best; but deterioration is rapid, and expensive improvements from time to time will become imperative.

Should he sell at this time, he will get all the profits of the years that his franchises run, and will be subject to none of the vicissitudes that such quasi-municipal property meets with. Moreover, should municipal ownership fail, he can then take back the property with a new and extended franchise which he could have obtained in no other manner.

There is no disposition to attribute to Mr. Johnson any personal motives. He has a property to sell. There is a sentiment in Detroit in favor of municipal ownership. He proposes

to take advantage of this sentiment to sell at a time when the market is good.

No sooner had the act been approved, however, than a committee of Detroit citizens employed counsel to test the validity of the new law. The case was brought in the Supreme Court of the State of Michigan by the attorney-general, on the relation of George H. Barbour and eight other citizens, against Hazen S. Pingree, Elliott G. Stevenson, and Carl E. Schmidt, the commissioners appointed by the common council under the act. It was argued for the relators that the act contravenes the provision in the constitution of the State which declares that the State shall not be a party to, or interested in, any work of internal improvement, nor engaged in carrying on any such work, except in the expenditure of grants to the State of land or other property.

This provision was inserted in the constitution of 1850 after a sad experience on the part of Michigan in relation to internal improvements,—notably, a canal from Mount Clemens to the mouth of the Kalamazoo River and the Michigan Central and the Michigan Southern Railways. In 1846 the railways, so far as constructed, were sold by the State to corporations chartered for the purpose of purchasing, at a sum much below what had been their cost; and the people provided against any repetition of State participation in such enterprises.

The Supreme Court has construed this provision to prevent the improvement of navigation of the Muskegon River (Ryerson v. Utley, 16 Mich. 269), and has held that "what the State, as a political community, cannot do, it cannot require the inferior municipalities to do" (People v. Salem, 20 Mich. 487). It was pointed out by the court that the competency of the State legislature to authorize a city to acquire and maintain a public park, a lighting-plant, a fire department, and the like, is not inconsistent with the views expressed, because such objects are a proper exercise of the municipal police. Incidentally to public lighting, also, a city may furnish light to citizens. Under the constitution of Massachusetts, which is unlike that of Michigan, it has been held to be competent for the legislature to authorize a city to furnish light to its citizens; yet two years later the same court held that it was not

competent to authorize a city to buy wood and fuel to sell to the inhabitants, because the carrying on of such a business cannot be regarded as a public service for which taxes may be levied. The decision of the court has not yet (June 10) been rendered. It is generally believed that the court will decide the law to be unconstitutional, and steps are being taken to accomplish the same object in a way not repugnant to the constitution.

The reasons why no extension of the charters of the Detroit railways can reasonably be expected are now to be examined. In November, 1862, the city council by ordinance provided for the use of certain streets for street railway purposes. The returns to the city were in the shape of license taxes on cars, and of course soon became inadequate. In 1879, or thirteen years before the expiration of the charter, a new agreement was made, whereby certain concessions were agreed to by both sides. The city granted an extension of the original charter for thirty years from that date, or seventeen years beyond the life of the original charter; and the roads agreed to an increase in taxation, and further agreed to sell eight tickets for a quarter during "workingmen's hours." From the very date of the new ordinance the terms were objected to as being not as advantageous as the city had a right to expect. In 1890 Mr. Pingree, having been elected mayor of Detroit, immediately took a stand in favor of greater compensation to the city. At that time the roads were still operated by horsepower. So strong was the feeling against the management of the lines that a riot ensued, in which men of prominence and influence in the community were active participants. the stress of popular feeling the roads were sold twice.

It having been discovered that the life of the corporation to which the original grant was made was limited to thirty years, while the city franchise as extended would run for forty-three years, a suit was brought by the city to uphold the contention that the franchise expired with the life of the original corporation. The case was transferred to the United States courts, and in the Circuit Court was decided in favor of the city. In the Court of Appeals, however, that decision was reversed. Judge Lurton, delivering the opinion, held that "a street rail-

way company is not incapable of taking a grant of a right to use streets of a city for its railway for a term extending beyond its own corporate franchise, the interest granted being assignable." (64 Federal Reporter, 628). In this decision the people acquiesced, with the idea that, when the time came for obtaining control over the streets, they would seek more adequate compensation for the privileges granted.

The question as to what is adequate compensation is one on which the people and the corporation naturally may be expected to differ; nor is any charter granted to a private corporation by a common council likely to be received with favor, because of the strong sentiment that has been aroused, particularly in Detroit, in favor of municipal ownership and lower fares. The question, therefore, is simply whether the city shall (and can) take action now, or whether the municipality will elect to await the expiration of the main franchises already granted.

The present proposition (anticipating an adverse decision of the court) is that the commission, acting as a private corporation, shall purchase the roads, and obtain a new consolidated security franchise substantially on the same terms as proposed for the municipal commission, the new corporation to hold the property in trust for the city until such time as constitutional authority for municipal ownership can be obtained, either by amending the constitution or in some other manner. The question naturally arises as to how far such action would differ from an extension of the present franchises to their present owners. The only new point in the controversy, in its present form, is whether the trial of three-cent fares by an inexperienced management is a sufficient compensation for granting the extension of a charter for nearly half a century.

CHARLES MOORE.

THE cause of education gains by the election of President Arthur T. Hadley of Yale University, and we trust the cause of economic science will not lose too heavily. The new honors and responsibilities have been worthily won by President Hadley, whose career as an administrator, it may be predicted, will be no less brilliant than it has been as a teacher and writer. Economic students meanwhile will hope that his pen may remain at their service in the future as in the past.

At the Commencement ceremonies of this year Harvard University tendered her congratulations alike to President Hadley and to the ancient seat of learning he has been chosen to represent, by conferring on him the honorary degree of Doctor of Laws.

THE organization of the central administrative force of the Twelfth Census has been completed by the appointment, as one of the five "chief statisticians," of Mr. S. N. D. North, who will have charge of the statistics of manufactures. The other appointments to the leading parts were noted in the last issue of this Journal.* Mr. North's qualifications for the work intrusted to him are of the highest, and make it certain that this part of the census work, like the rest, will be ably directed.

The United States Industrial Commission, whose organization has also been described in these columns, † has made several commendable appointments of specialists to aid in its investigations. Professor J. W. Jenks, of Cornell University, is "expert agent" on trusts and industrial combinations; Professor E. R. Johnston, of the University of Pennsylvania, has the same appointment on transportation; and Mr. F. J. Stimson, of Boston, is special counsel to aid in the preparation of a report on labor legislation.

^{*}See p. 35 of the current volume.

[†]See the article by Mr. Carroll D. Wright, p. 228 of the current volume. A more detailed account is given in the *North American Review* for June, by Mr. North, who is a member of the Industrial Commission.

In May of the current year a notable conference was held in Berlin for the renewal and support of the movement to promote international concert with regard to labor legislation. Among those in attendance were legislators, business men, and scholars; and a committee of twenty was appointed to maintain and enlarge the organization, with authority to take part in an international conference and to form a national section for Germany.

It will be recalled that this subject was discussed at the Berlin Conference of 1890 and at the congresses at Zürich in August, 1897, and in Brussels in October, 1897. At the last-named gathering, at Brussels, a committee was appointed to draft articles for an international organization; and the completion of this draft has now led to the Berlin movement. Among those who took part may be mentioned Professors Brentano, Schmoller, and Wagner. The Socialist party in the Reichstag, oddly enough, refused to take part in the movement,—at first, on the ground of some informality in the invitation extended to them; but, finally, after repeated invitation, with simply a flat refusal.

THE "franchise" tax act in New York, of which an account appears in another column from the competent hands of Professor Seligman, is but one of several tax measures of importance which have been under discussion in different States. This one alone reached the stage of enactment, showing once more how all-important is the element of courageous leadership in securing legislative action. In Michigan, a bill for taxing railway companies on the whole "value" of their property, on a plan analogous to that used in other States of the Middle West, was strongly urged; but an act previously passed in the same session for taxing express companies in the same manner was held unconstitutional by the Supreme Court of the State, and the railway bill was then withdrawn. A plan for an income tax, to be assessed by declaration of the tax-payers, was also under discussion; and, finally, a proposal

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for a tax commission to investigate and report. Nothing came of all this; and yet it is clear that sooner or later—and probably sooner rather than later—noteworthy changes will be made in Michigan. In Massachusetts the movement for a general succession tax is gaining strength. A bill for a graduated tax ranging from 1 per cent. on estates under \$50,000 to 8 per cent. on estates over \$5,000,000 was passed by the Massachusetts House; and, when this was rejected by the Senate, another bill for a level tax of 5 per cent. was passed by the House, but also failed in the Senate by a narrow vote. Here, too, it is only a question of time when this addition to the tax system of Massachusetts will come; while it must remain a question whether the change will be accompanied by other needed readjustments in the tax system.

In the Jahrbücher für National-cekonomie (No. 5 of the current volume) Professor J. Conrad brings down to the present time the index numbers for prices in Hamburg which have been published from time to time in that journal; and in the Journal of the Royal Statistical Society for March Mr. A. Sauerbeck brings to date his much-used index numbers for English prices. Some of the salient results of these inquiries are here noted for convenience of reference and comparison.

The simplest and most easily comparable figures are the general index numbers showing the arithmetical means of the prices of the several years. Mr. Sauerbeck's figures represent an average for 45 commodities in London; Professor Conrad's, for 163 commodities in Hamburg. For the former the average for the decade 1867-77 is taken as the base (— 100): for the latter the average for 1871-80 is taken as the base (— 100). Professor Conrad's figures are given year by year only for the most recent period. These divergences in the basis and method of presentation of the results need to be borne in mind. The figures are:—

							Sauerbeck, 45 commodities, 1867-77 = 100.				163 00	Conrad. mmodities. 1–80 = 100.
1879							88					
1880	•	•		•	•		88					
1881							85					
188 2							84					
1883							82	1881-85				87.8
1884							76					
1885	•	•	•	•	•		72					
1886							69					
1887							68					
1888							70	1886-90				83.8
1889							. 72					
1890	•	•	•	•	•	•	72					
1891							72	1891-95				82.0
18 92							68					
1893							68	1898			•	88.0
1894							63	1894				78.3
1895							62	1895				78.4
1896							61	1896				74.8
1897							62	1897				77.2
1898						•	64					

The trend of the figures is the same in both cases; and for recent years they indicate that, while a slight rise of prices took place in 1897 and 1898, the range is still below that for 1893. Substantially the same results are derived from the price quotations collected in Germany by the Imperial Bureau of Statistics, which, like Mr. Sauerbeck's, are continued to the year 1898. In these, with the whole period 1879–98 as a basis (— 100), the index numbers are:—

1889-93																00.0
T000-00	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	00.0
1894-98												•				83.4
1896																81.8
1897																82.6
1898											_				_	84.0

Professor Conrad gives still a different set of figures, representing the weighted mean for 22 articles, the articles being

weighted according to the quantities consumed in Germany. The index numbers so obtained are:—

								18	71 - 80 = 100.
1881-85									81.8
1886-90									67.9
1891-95									68.7
1893									65.5
1894									58.7
1895									57.5
1896									57.1
1897									60.1

This weighted mean would indicate a fall in prices far greater than that deduced from the simple average of the 143 Hamburg commodities. But as only 22 articles were used in making up the weighted average, the discrepancy is not necessarily significant of a divergence in the outcome of the two methods; and the much larger number of commodities used for the simple mean makes the figure so obtained the safer one.

For 47 Hamburg articles prices are on record for the period 1840-1897 which are strictly comparable; that is, of commodities whose quality has remained the same. Virtually, all of these show in 1897 prices lower than their average for the earlier half of the period; i.e., for the years 1847-70. Only four show higher prices; namely, coffee, cocoa, herrings, and linen yarn. As compared with the years immediately preceding, the year 1897 shows no changes of much significance.

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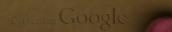
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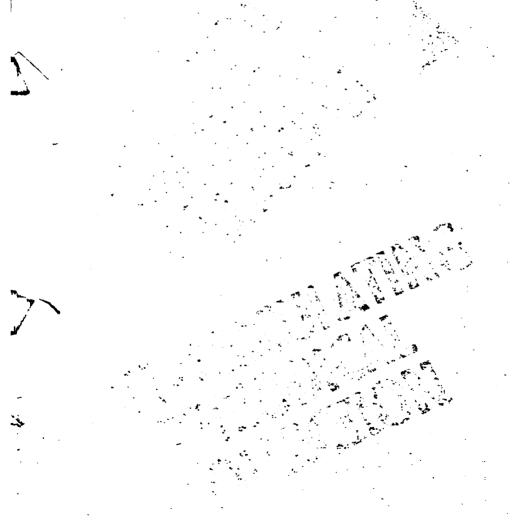
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